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Summary of
Cotton Fiber and Processing Test Results

CROP of 1974

U.S. DEPARTMENT OF AGRICULTURE
Agricultural Marketing Service
Cotton Division, May 1975

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SUMMARY OF COTTON FIBER AND PROCESSING TEST RESULTS
CROP of 1974

INTRODUCTION

This report contains information on the fiber properties and spinning performance of cotton from major commercial production areas of the United States. Similar reports have been published annually since 1946. 1/ These reports summarize and add supplemental information to the data published in biweekly reports which were titled "Cotton Fiber and Processing Test Results, Crop of 1974" and numbered 1 through 13.

The results of fiber and spinning tests made in connection with these annual surveys provide data for studies of the relationships between fiber properties, processing performance and product quality. The data are used to measure the effectiveness of the standards to be sure that they continue to reflect differences in spinning utility. Publication of the bi-weekly reports enables merchants and manufacturers to use the results to locate sources of cotton to meet their specific requirements. Farmers and breeders may also use the data as a source of quality information regarding the various varieties of cottons produced under commercial growing conditions.

SAMPLING PROCEDURES

The procedure for selecting samples for the 1974 survey was designed to provide test lots representing all major varieties in each of the territories served by Cotton Division classing offices. Variety selections were based on the predominant varieties planted in each classing office territory as reported by the Cotton Division in "Cotton Varieties Planted, 1970-1974". A production area was selected to represent the leading variety and one to represent each of the other varieties with an expected production of 10,000 bales or more in each classing office territory. Additional areas were selected for those varieties with a production of over 150,000 bales. One additional production area was selected for each 150,000 bales or portion thereof in excess of the first 150,000 bales. Production areas with at least 70 percent of one variety were designated as that variety with no attempt made to maintain the purity of the variety except by selection of representative production areas. However, in some cases, where there was unusual interest in a particular variety and a low percentage was planted in the area, the classing offices selected lots representing 100 percent of the variety. The locations of the 132 production areas selected for the 1974 survey are shown on figure 1.

1/ Copies of past summary reports may be obtained from the Standardization Section, Cotton Division, AMS, USDA, 4841 Summer Avenue, Memphis, Tennessee 38122 until supplies are exhausted.

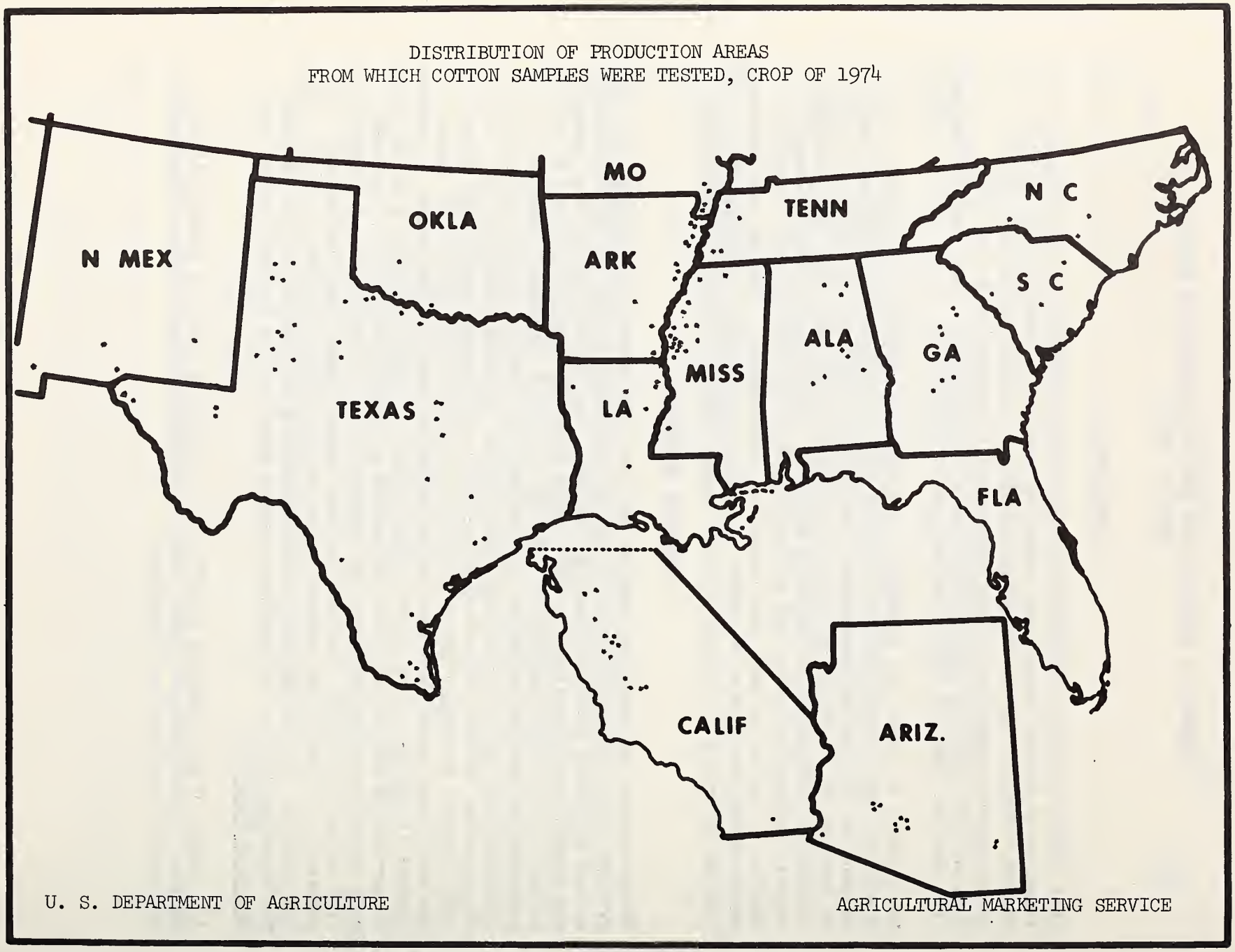

Figure 1. Location of production areas selected for the 1974 Survey.

Test lots were collected from each production area at intervals of three weeks during the harvest season. Lots were selected to represent the predominant grade and staple being classed at the time of collection. For the most part, these areas produce the specified qualities in quantities large enough to enable buyers to obtain lots of even-running grade and staple. Obviously, other qualities of cotton are available in each area as a result of normal seasonal, soil, harvesting and other variations. Most production areas also produce cotton of varieties other than those included in the tests.

Each spinning lot used in this study was made up of 20 to 30 samples of the same grade and staple length from bales classed for growers under the Smith-Doxey Act. These even-running lots of samples were then tested at Cotton Division fiber and spinning laboratories. While this method of collecting samples does not provide data for all qualities in the crop, it does provide average test results for those qualities in largest supply during each three-week period.

LABORATORY PROCEDURES

Fiber, spinning, and chemical finishing tests were performed under standardized procedures at the Cotton Division spinning laboratory at Clemson, South Carolina. Most of the fiber tests were performed in the standard atmospheric conditions of 65 percent relative humidity at a temperature of 70 degrees F. Standard test procedures as outlined by the American Society for Testing and Materials were used in making tests. Tests not covered by ASTM were performed using commonly accepted procedures as recommended by the instrument manufacturer. Five subsamples were taken at random from each spinning lot to provide representative specimens for the fiber tests.

Yarn processing or spinning tests were performed by a technique developed in the Cotton Division laboratories for processing small lots of cotton on standard-type textile machines. The samples in each lot were thoroughly composited by hand-mixing before being fed to the first process picker. This hand-mixing is similar to the machine mixing normally obtained in cotton textile opening equipment. Observations were made at each process to measure processing behavior and the yarns produced were tested to measure product quality.

On the basis of average past performance, cottons were grouped according to the expected staple length for the specified variety. All cottons of the specified variety were spun in the same manner regardless of difference in staple length. This was done so that direct comparisons of different lots of cotton within a specified variety could be made. These samples were

carded at specified production rates and spun into numbers that reflect the manufacturing values of the varieties tested. In general, the rates of carding and yarn numbers spun from the 1974 crop are as follows:

Group 1.--Short staple cottons, carded at 12-1/2 pounds per hour and spun into carded 8s and 22s yarns with a twist multiplier of 4.40 plus a carded yarn spinning potential test for all lots. This includes varieties which normally produce staple lengths 31/32 and shorter.

Group 2.--Medium staple cottons, carded at 9-1/2 pounds per hour and spun into carded 22s and 50s yarns with a twist multiplier of 4.00 plus a carded yarn spinning potential test for all lots. This group includes varieties which normally produce cottons from 1 inch through 1-3/32 inches in staple length.

Group 3.--Long staple cottons, carded at 6-1/2 pounds per hour and spun into both carded and combed 22s and 50s yarns with a twist multiplier of 3.80 plus a carded yarn spinning potential test for all lots. This group includes upland varieties which normally produce cottons from 1-1/8 inches through 1-1/4 inches in staple length.

Group 4.--Extra long staple cottons, carded at 4-1/2 pounds per hour and spun into combed 50s and 80s yarns with a twist multiplier of 3.60. This group includes all American Pima and American upland extra long staple varieties, which are usually 1-5/16 inches or longer in staple length.

Skeins of yarn from each spinning test lot were bleached and dyed by a technique developed in the Cotton Division laboratories for small scale finishing tests. Color tests were made on gray and chemically finished skeins of yarn as measures of the bleaching and dyeing behavior.

TEST RESULTS

U. S. Average - Upland Cotton

American upland spinning lots tested from the 1974 crop totaled 391, which includes short, medium and long staple cottons. This compares with 456 lots tested from the 1973 crop. Average fiber test results show 1974 cotton to be slightly less uniform, finer and stronger than in 1973. Both Shirley Analyzer nonlint content and picker and card waste were higher in 1974. Yarns spun from these samples were slightly stronger with lower appearance grades and higher imperfections. (Table 1).

Group 1.--Short Staple Cottons

A total of 57 short staple American upland spinning lots was tested from the 1974 crop compared to 70 in 1973. Average results showed the 1974 cottons to be less uniform, considerably finer and stronger at zero gage strength than the 1973 crop cottons. Yarns spun from these samples were weaker with much lower appearance grades than the previous year. Yarn imperfections were considerably higher for the 1974 crop cottons as compared with 1973. The spinning potential number was slightly lower.

Group 2.--Medium Staple Cottons

A total of 299 medium staple American upland spinning lots was tested from the 1974 crop compared to 346 lots from the 1973 crop cottons. Average fiber properties for the 1974 cottons tested show these cottons to be slightly longer, less uniform, finer and stronger at both zero and 1/8" gage strength than the 1973 cottons. Picker and card waste was higher than a year ago. Yarns spun from these samples showed slightly stronger yarn strength with lower appearance grades but fewer imperfections than a year ago. Average spinning potential was higher in 1974.

The Southeastern production area includes the states of Virginia, North Carolina, South Carolina, Georgia, Florida and Alabama. A total of 51 medium staple spinning lots was tested from this area in 1974 compared to 57 in 1973. Average results in 1974 showed these cottons to be slightly longer, less uniform, finer and weaker at zero gage strength than the previous year. Shirley Analyzer nonlint content was slightly less for the 1974 cottons, while picker and card waste was significantly higher than a year ago. Yarns spun from these samples were slightly stronger with lower appearance grades and fewer imperfections.

The South Central production area includes the states of Tennessee, Missouri, Mississippi, Arkansas and Louisiana. A total of 128 medium staple lots was tested in 1974 compared to 167 lots from the 1973 crop. Average results in 1974 showed these cottons to be less uniform, significantly finer and stronger at zero gage strength than in 1973. Both Shirley Analyzer nonlint content and picker and card waste were higher in the 1974 cottons. Yarns spun from these samples were stronger with lower appearance grades and slightly fewer imperfections. Average spinning potential was higher.

The Southwestern production area consists of the states of Oklahoma and Texas except far west Texas (served by the Pecos and El Paso classing offices). A total of 48 medium staple American upland spinning lots was tested from the 1974 crop compared to 54 from the 1973 crop. Average results showed the 1974 cottons to be less uniform, finer and stronger than the 1973 crop. Both Shirley Analyzer nonlint content and picker and card waste were higher. Yarns spun from these samples were slightly stronger with much lower appearance grades than the 1973 crop. Yarn imperfections were higher in 1974 cottons. Average spinning potential yarn number was slightly higher.

The Western production area consists of the states of California, Arizona, New Mexico and far west Texas. A total of 72 medium staple spinning lots was tested from this area in 1974 compared with 68 lots for the 1973 crop. Average results from these medium staple samples show 1974 cottons to be slightly more uniform and coarser than the 1973 crop. Both Shirley Analyzer nonlint content and picker and card waste were higher in 1974. Yarns spun from these samples were slightly weaker with higher appearance grades and fewer imperfections than the previous year.

Group 3.--Long Staple Cottons

A total of 35 long staple American upland spinning lots was tested in 1974 compared to 40 lots in 1973. Average results showed the 1974 cottons to be longer, less uniform, finer and stronger than the previous year. Yarns spun from these samples were slightly weaker with lower appearance grades than in 1974. The 1974 cottons showed more imperfections than the 1973 cottons. The spinning potential yarn number was slightly higher than for the 1973 cottons.

A total of 15 long staple American upland spinning lots was tested in 1974 from the Southeastern area compared to 18 lots in 1973. Average results show 1974 cottons to be longer, less uniform, finer and stronger at zero gage strength than in 1973. Shirley Analyzer nonlint content was slightly higher. Yarns spun from these samples in 1974 were stronger with lower appearance grades. Yarn imperfections were greater in 1974. Average spinning potential yarn number was higher.

A total of six long staple American upland spinning lots were tested from the South Central area in 1974 compared to seven lots in 1973. Average fiber test results show the 1974 cottons to be longer, finer and weaker at 1/8" gage strength than in 1973. Shirley Analyzer nonlint content was less than in 1973. Yarns spun from these samples were weaker with much lower appearance grades. The 1974 cottons showed slightly fewer yarn imperfections than in 1973. Average spinning potential yarn number was higher in 1974.

A total of 14 long staple American upland spinning lots was tested in 1974 from the Western area compared to 15 lots tested in 1973. Average fiber test results from these long staple lots show 1974 cottons to be slightly longer, coarser and stronger at zero gage fiber strength than in 1973. Picker and card waste was less in 1974 cottons. Yarns spun from these samples were weaker with slightly higher appearance grades. Yarn imperfections were slightly higher in the 1974 cottons. Average spinning potential yarn number was higher in 1974.

Group 4.--Extra Long Staple Cottons

A total of 19 extra long staple American Pima spinning lots was tested from the Western area in 1974. This compares with 20 lots tested in 1973. Average fiber test results show 1974 extra long staple cottons to be shorter, slightly more variable, finer and weaker than 1973 cottons.

Shirley Analyzer nonlint content, picker and card waste and comber waste were less for the 1974 cottons. Yarns spun from these samples were weaker with lower appearance grades and more imperfections in 1974.

Table 1.--Cotton: Average results of classification, fiber and processing tests from selected gin points, crops of 1973 and 1974 1/

Area and Crop Year	Lots tested	Grade	Staple	Fiber test results						Processing test results				
				Fibrograph		Mike	Strength		Shirley Analyzer non-lint	Picker & Card Waste	Skein strength 22s	Appearance 22s	Yarn imperf. 22s	Spin. Potent.
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage						
	No.	Index	32d in	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	No.
SHORT STAPLE - American upland														
Southwest														
1973	70	93	30.9	.96	46	4.4	82	21	3.3	6.3	91	108	16	42
1974	57	88	30.9	.96	44	3.8	83	21	4.0	7.3	90	91	27	40
MEDIUM STAPLE - American upland														
Southeast														
1973	57	90	34.1	1.08	46	4.5	82	22	3.6	6.0	101	105	21	61
1974	51	91	34.5	1.09	45	4.3	81	22	3.4	6.5	102	103	19	61
South Central														
1973	167	92	34.4	1.10	45	4.5	81	22	3.1	5.8	101	107	19	61
1974	128	91	35.0	1.10	44	4.0	83	22	3.2	6.3	105	102	18	63
Southwest														
1973	54	93	33.4	1.07	45	4.3	82	22	3.1	5.8	98	97	22	56
1974	48	91	33.6	1.07	44	4.0	84	23	3.3	6.5	100	87	24	57
West														
1973	68	98	35.1	1.10	45	4.3	91	25	2.4	5.2	116	101	17	66
1974	72	95	35.1	1.10	46	4.5	91	25	2.5	6.0	115	103	16	66
Average														
1973	346	93	34.4	1.09	45	4.4	84	22	3.1	5.7	104	104	20	61
1974	299	92	34.7	1.10	44	4.2	85	23	3.1	6.3	106	100	19	63

1/ Based on a limited number of samples of modal quality

Table 1.--Continued

Area and Crop Year	Lots tested	Grade	Staple	Fiber test results						Processing test results				
				Fibrograph		Mike	Strength		Shirley Analyzer non-lint	Picker & Card Waste	Skein strength 22s	Appearance 22s	Yarn imperf. 22s	Spin. Potent.
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage						
	No.	Index	32d in	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Lbs.	Index	No.	No.
LONG STAPLE - American upland														
Southeast														
1973	18	88	34.3	1.12	45	4.6	81	23	3.9	8.7	103	117	14	65
1974	15	90	35.1	1.15	43	4.0	82	23	4.0	8.7	104	104	21	67
South Central														
1973	7	90	35.3	1.14	44	4.3	85	24	4.3	8.8	108	114	20	64
1974	6	92	35.5	1.15	44	4.0	85	23	4.0	8.8	105	102	19	65
West														
1973	15	98	36.2	1.15	45	3.6	91	27	2.7	7.6	132	95	19	88
1974	14	94	36.6	1.16	45	3.7	93	27	2.7	7.4	128	96	20	89
Average														
1973	40	92	35.2	1.13	45	4.2	86	24	3.5	8.3	115	108	17	74
1974	35	92	35.8	1.15	44	3.9	87	24	3.5	8.2	114	101	20	75
U. S. UPLAND AVG.														
1973	456	93	33.9	1.08	45	4.4	84	22	3.1	6.0	103	105	19	60
1974	391	91	34.2	1.08	44	4.1	85	23	3.2	6.6	104	99	20	60
EXTRA LONG STAPLE - American Pima														
West				Array							50's Combed Yarn			Comber Waste
1973	20	3	44.0	1.46	31	3.7	101	34	3.4	8.1	67	118	1	18.4
1974	19	4	44.1	1.44	32	3.5	100	32	2.9	8.0	64	110	2	18.0

Table 2.--Cotton: Average results of classification, fiber tests, and carded yarn processing tests by state for American upland samples from selected gin points, crops of 1973 and 1974

Area state and crop year	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
SOUTHEAST															
Medium staple:															
Alabama															
1973	30	90	34.0	1.07	46	4.5	82	22	7.0	3.3	2	3	96	5.6	61
1974	26	91	34.4	1.09	45	4.3	83	23	6.6	2.9	2	3	97	6.0	63
Georgia															
1973	12	88	33.8	1.08	45	4.5	83	22	6.6	3.7	3	3	94	5.8	58
1974	13	89	34.2	1.07	44	4.4	79	21	6.5	3.9	3	3	95	7.1	54
North Carolina															
1973	6	91	34.8	1.08	46	4.6	83	23	6.6	4.4	3	3	96	7.2	61
1974	6	90	35.3	1.11	45	4.1	80	22	6.4	4.4	2	3	98	7.3	66
South Carolina															
1973	9	88	34.6	1.10	46	4.6	81	22	6.6	4.3	3	3	95	6.6	65
1974	6	93	35.0	1.12	45	4.4	81	21	6.4	3.8	2	3	99	6.4	63
Long staple:															
Alabama															
1973	7	88	33.9	1.11	44	4.4	80	22	7.4	3.8	3	3	95	8.8	61
1974	3	85	35.0	1.15	43	3.5	82	24	7.3	4.8	2	3	97	8.9	80
Georgia															
1973	6	90	34.2	1.12	45	4.8	82	23	6.7	3.5	3	4	92	8.4	62
1974	6	91	34.7	1.15	42	4.2	83	23	6.7	4.1	2	3	98	9.0	62
North Carolina															
1973	2	90	35.0	1.12	46	4.6	86	24	6.5	4.0	2	3	95	8.3	76
1974	3	94	35.7	1.15	43	3.9	82	22	6.4	3.7	2	3	99	8.3	65
South Carolina															
1973	3	85	35.0	1.16	44	4.4	80	23	6.7	5.0	3	3	94	9.2	73
1974	3	91	35.7	1.14	43	4.2	79	22	6.7	3.3	3	3	96	8.4	66
SOUTH CENTRAL															
Medium staple:															
Arkansas															
1973	55	93	34.5	1.10	45	4.5	82	22	7.2	3.2	2	3	98	5.9	62
1974	38	92	35.1	1.11	44	4.0	84	22	6.9	3.2	2	3	98	6.3	64
Louisiana															
1973	24	91	34.4	1.10	45	4.6	79	22	7.4	2.9	3	3	94	5.5	60
1974	18	90	34.7	1.10	44	4.4	82	22	6.9	3.0	3	2	95	6.2	61
Mississippi															
1973	61	91	34.6	1.11	45	4.5	82	22	7.2	3.4	2	2	97	6.0	63
1974	51	90	34.9	1.09	44	4.1	84	23	6.7	3.4	2	2	97	6.7	63
Missouri															
1973	15	94	34.1	1.07	45	4.4	82	21	6.9	2.7	2	3	99	5.3	57
1974	12	93	35.1	1.11	43	3.8	81	22	7.2	2.5	2	3	99	5.8	65
Tennessee															
1973	12	94	33.8	1.06	46	4.6	81	21	7.1	2.6	2	3	98	5.3	58
1974	9	93	35.0	1.10	44	3.9	82	22	7.0	2.8	1	3	100	6.0	67

Table 2.--Continued

Area state and crop year	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
SOUTHEAST	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
Medium staple:															
Alabama															
1973	30	101	32	6.5	4.7	108	84	18	14	82.5	3.5	97	29.1	25.3	97
1974	26	104	35	6.3	4.4	104	82	16	13	84.5	3.2	103	27.4	25.9	103
Georgia															
1973	12	98	31	6.1	4.3	100	77	26	20	82.1	3.7	96	29.5	24.9	94
1974	13	94	30	5.9	4.1	106	81	18	14	83.8	3.1	102	27.5	25.9	103
North Carolina															
1973	6	107	34	6.4	4.5	105	82	24	17	82.3	3.6	97	28.7	25.6	99
1974	6	109	38	6.5	4.7	98	83	29	18	84.6	3.2	103	26.7	25.9	104
South Carolina															
1973	9	102	34	6.3	4.5	102	82	23	17	82.5	3.4	98	28.7	25.6	99
1974	6	103	34	6.3	4.5	98	77	22	16	85.1	3.1	105	26.6	26.3	106
Long staple:															
Alabama															
1973	7	100	32	6.4	4.7	116	91	14	11	83.3	3.3	100	28.5	25.1	97
1974	3	115	40	6.8	5.2	97	70	21	18	83.9	3.7	100	26.8	25.9	104
Georgia															
1973	6	103	31	6.2	4.5	120	90	14	10	82.4	3.8	96	28.9	25.4	98
1974	6	101	33	6.0	4.5	103	78	22	16	84.0	3.2	102	27.2	26.1	104
North Carolina															
1973	2	111	37	6.5	4.6	120	95	12	10	83.1	3.4	99	28.7	25.0	97
1974	3	103	34	6.2	4.4	107	73	23	18	83.3	3.1	101	27.7	25.8	102
South Carolina															
1973	3	104	35	6.2	4.9	110	87	17	15	82.6	3.2	98	29.1	25.5	98
1974	3	100	32	6.0	4.3	110	83	16	13	85.5	3.2	106	27.3	26.6	106
SOUTH CENTRAL															
Medium staple:															
Arkansas															
1973	55	103	33	6.5	4.6	106	82	19	15	82.4	3.3	98	28.5	25.6	99
1974	38	105	35	6.5	4.6	100	77	18	14	84.8	3.2	104	27.1	25.9	103
Louisiana															
1973	24	96	31	6.4	4.5	102	79	23	18	82.7	3.3	99	28.6	25.7	100
1974	18	98	32	6.1	4.2	111	86	17	13	84.3	3.1	103	26.8	26.1	105
Mississippi															
1973	61	103	33	6.6	4.7	108	81	18	14	82.4	3.3	98	28.9	25.4	98
1974	51	106	35	6.4	4.5	102	81	18	13	84.3	3.1	103	27.3	25.9	103
Missouri															
1973	15	97	30	6.5	4.6	103	80	21	15	82.6	3.3	98	28.3	25.7	100
1974	12	106	36	6.9	4.8	99	74	18	14	84.2	3.3	102	27.0	25.9	104
Tennessee															
1973	12	95	30	6.3	4.6	112	90	14	12	82.0	3.4	96	28.1	25.5	100
1974	9	109	37	7.0	4.8	103	79	18	15	84.9	3.4	103	26.4	25.9	105

Table 2.--Cotton: Average results of classification, fiber tests, and carded yarn processing tests by state for American upland samples from selected gin points, crops of 1973 and 1974--Continued

Area state and crop year	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
SOUTH CENTRAL (Continued)	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
Long staple:															
Mississippi															
1973	4	87	36.2	1.18	44	4.2	86	24	6.4	5.5	2	2	94	9.4	68
1974	3	91	36.0	1.15	44	4.1	87	23	6.1	4.4	2	3	95	9.3	63
Tennessee															
1973	3	94	34.0	1.09	44	4.4	84	23	6.8	2.7	2	3	99	8.0	59
1974	3	94	35.0	1.14	43	3.9	83	23	7.2	3.5	1	3	100	8.4	67
SOUTHWEST															
Short staple:															
Central Texas															
1973	18	88	31.7	1.01	46	4.6	85	21	6.3	3.7	3	3	91	6.6	45
1974	15	87	30.4	.95	44	4.2	87	20	5.8	3.5	4	4	89	7.1	38
Northwest Texas															
1973	44	95	30.6	.95	46	4.3	82	21	6.9	3.1	2	3	99	6.2	41
1974	33	88	30.9	.96	44	3.5	81	21	6.5	4.3	3	4	94	7.4	41
Oklahoma															
1973	6	96	31.2	.96	46	4.6	78	20	7.4	2.8	2	3	99	5.5	42
1974	9	88	31.4	.99	44	4.4	82	21	6.3	3.4	3	4	92	7.2	40
Medium staple:															
South Texas															
1973	15	92	33.9	1.08	45	4.5	80	21	6.0	2.5	3	3	95	5.5	60
1974	21	95	33.8	1.08	45	4.4	84	23	6.2	2.6	2	3	100	5.7	63
Central Texas															
1973	15	89	33.9	1.07	45	4.2	82	21	6.5	3.3	3	3	92	6.1	58
1974	9	87	33.4	1.05	43	4.1	85	21	6.3	3.5	4	3	90	6.7	50
Northwest Texas															
1973	21	96	32.3	1.03	45	4.2	83	22	6.7	3.2	2	3	100	5.8	51
1974	18	88	33.3	1.07	42	3.5	85	23	6.5	4.1	2	3	97	7.4	54
WEST															
Medium staple:															
Arizona															
1973	17	100	34.8	1.10	44	4.6	86	23	6.9	2.4	0	3	105	5.3	55
1974	26	93	35.1	1.10	44	4.7	85	23	6.3	2.9	2	2	98	6.2	58
California															
1973	45	97	35.4	1.11	46	4.3	95	26	5.7	2.3	1	3	101	5.2	72
1974	43	96	35.3	1.11	47	4.3	96	27	5.6	2.2	1	3	101	5.8	72
West Texas															
1973	6	100	34.0	1.07	43	3.8	80	22	7.8	2.4	0	3	106	5.1	59
1974	3	89	34.0	1.07	43	4.2	78	21	7.0	2.4	3	3	93	7.1	56
Long staple:															
New Mexico															
1973	9	99	36.3	1.16	45	3.6	93	27	6.3	2.4	1	3	104	7.2	91
1974	10	94	36.7	1.16	45	3.6	92	26	6.0	2.6	2	2	100	7.4	88
West Texas															
1973	6	97	36.0	1.12	44	3.5	88	26	6.4	3.1	1	3	104	8.1	84
1974	4	94	36.5	1.17	45	4.0	95	27	5.5	2.8	2	2	98	7.4	88

Table 2.--Continued

Area state and crop year	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL (Continued)															
Long staple:			50's		50's		50's		50's						
Mississippi															
1973	4	116	39	6.3	4.8	110	88	22	16	83.3	3.3	100	29.9	24.8	93
1974	3	104	33	5.8	4.2	103	80	18	15	84.3	3.1	103	26.7	26.0	104
Tennessee															
1973	3	98	30	6.0	4.3	120	93	17	10	83.0	3.7	97	28.4	25.3	98
1974	3	107	35	6.3	4.6	100	73	19	14	85.2	3.4	104	26.4	25.9	105
SOUTHWEST															
Short staple:			8's		8's		8's		8's						
Central Texas															
1973	18	97	303	6.5	7.4	112	126	19	23	83.2	3.7	98	29.8	25.3	95
1974	15	86	282	5.6	6.6	99	121	18	27	82.9	3.5	98	28.3	25.4	99
Northwest Texas															
1973	44	89	288	6.5	7.8	107	123	15	19	82.2	3.8	95	28.9	25.5	98
1974	33	93	305	6.7	7.6	87	108	31	51	83.2	4.1	97	28.2	24.9	97
Oklahoma															
1973	6	88	280	6.7	8.2	112	123	12	14	82.6	4.0	96	28.8	25.9	100
1974	9	88	293	6.2	7.1	91	118	28	45	83.5	3.6	99	27.5	25.3	100
Medium staple:			50's		50's		50's		50's						
South Texas															
1973	15	98	32	5.9	4.2	98	77	24	18	83.7	3.4	101	29.8	26.0	98
1974	21	105	37	6.1	4.4	96	80	17	14	83.1	3.2	100	27.3	26.3	104
Central Texas															
1973	15	99	32	6.1	4.3	99	75	27	21	82.9	3.5	98	29.9	25.0	94
1974	9	86	27	5.4	4.0	82	68	24	20	82.3	3.7	96	28.5	25.4	99
Northwest Texas															
1973	21	97	29	6.3	4.6	93	76	19	15	82.0	3.8	95	28.9	25.4	98
1974	18	102	34	6.4	4.7	79	66	33	28	84.4	3.6	101	28.4	24.8	96
WEST															
Medium staple:															
Arizona															
1973	17	102	32	6.3	4.6	107	82	15	12	83.0	3.1	100	28.1	26.4	103
1974	26	102	34	6.1	4.4	107	83	17	13	84.2	3.0	103	27.8	25.8	102
California															
1973	45	123	42	6.0	4.5	100	77	17	13	82.1	3.5	97	28.5	25.2	98
1974	43	125	46	5.9	4.4	100	81	16	12	84.0	3.2	102	27.0	25.6	102
West Texas															
1973	6	103	32	7.2	5.2	95	75	18	15	83.9	3.4	101	27.9	25.0	102
1974	3	97	32	6.4	4.2	97	77	15	11	84.4	3.8	100	28.0	25.4	100
Long staple:															
New Mexico															
1973	9	136	48	6.5	4.9	93	78	18	15	83.2	3.4	99	27.9	25.0	98
1974	10	129	46	6.2	4.8	95	75	21	16	84.7	3.2	104	27.9	25.1	99
West Texas															
1973	6	128	44	6.6	4.9	97	78	20	14	83.5	3.5	100	28.0	25.5	100
1974	4	126	45	6.0	4.7	100	80	18	12	83.8	3.1	102	28.2	25.2	98

Table 3.--Cotton: Average results of fiber and carded yarn processing tests by grade and staple combinations for American upland samples from selected gin points, crop of 1974

Staple group, area, grade and staple			Spinning lots tested	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
Name	Code	32d in.	No.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
SHORT STAPLE GROUP															
Southwest															
SLM	41	32	3	1.01	45	4.4	84	22	6.4	3.0	2	3	99	6.4	48
SLM Lt Sp	42	30	7	.95	44	4.2	84	21	5.9	3.7	4	4	90	7.2	37
		31	14	.96	43	3.7	82	21	6.4	3.8	3	4	92	7.2	41
		32	8	1.01	43	4.0	83	22	6.4	3.8	3	4	93	6.9	45
LM Lt Sp	52	30	6	.94	43	3.8	82	20	6.1	4.0	4	4	86	8.1	33
		31	3	.95	43	2.7	75	20	7.5	6.8	3	4	96	8.4	43
MEDIUM STAPLE GROUP															
Southeast															
SLM	41	34	13	1.08	45	4.4	81	22	7.1	2.6	2	3	98	5.8	60
		35	16	1.12	45	4.3	84	23	6.2	3.0	2	3	98	6.0	66
SLM Lt Sp	42	34	4	1.07	44	4.6	80	21	6.7	3.8	3	3	94	6.9	54
LM	51	34	6	1.07	44	4.3	79	22	6.4	4.2	3	3	94	7.9	55
		35	5	1.10	45	4.2	80	22	6.2	4.1	3	2	94	6.7	62
South Central															
SLM	41	34	5	1.08	44	4.3	85	22	6.8	3.2	2	2	98	6.1	61
		35	71	1.11	44	4.0	83	23	7.0	2.8	2	3	100	6.0	64
		36	9	1.15	44	4.1	83	23	7.6	2.8	1	2	101	5.9	72
SLM Lt Sp	42	35	7	1.09	43	3.7	80	22	6.8	3.4	3	3	94	6.8	60
LM	51	34	9	1.08	44	4.4	83	22	6.5	3.4	3	2	92	7.1	58
		35	20	1.08	44	3.8	84	22	6.3	4.0	2	2	95	7.0	61
Southwest															
M	31	33	3	1.06	45	4.4	82	23	6.7	2.1	0	3	104	5.4	62
SLM	41	33	3	1.05	42	2.8	82	22	6.9	3.2	1	3	102	6.1	59
		34	14	1.08	45	4.2	84	23	6.3	2.6	2	3	100	5.7	62
SLM Lt Sp	42	32	4	1.04	44	4.4	86	24	6.2	3.9	3	3	94	7.6	46
LM	51	35	5	1.13	42	3.5	84	23	6.3	4.6	2	3	97	7.5	54
West															
M	31	35	14	1.10	46	4.6	95	26	5.9	1.8	1	3	103	5.4	66
SLM	41	35	32	1.10	46	4.5	90	25	5.9	2.6	2	3	99	6.1	64
		36	11	1.14	46	4.3	93	26	5.6	2.8	2	3	99	6.2	73

Table 3.--Continued

Staple group, area, grade and staple			Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
				22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
Name	Code	32d in.	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
SHORT STAPLE GROUP																	
Southwest					8s		8s		8s		8s						
SLM	41	32	3	100	314	6.5	7.6	103	127	21	31	82.9	3.1	100	26.5	25.7	104
SLM Lt Sp	42	30	7	85	281	5.7	6.6	106	120	18	27	82.5	3.7	97	28.2	25.5	99
		31	14	92	302	6.6	7.5	88	109	29	48	83.2	4.2	96	27.8	24.9	98
		32	8	96	313	6.6	7.5	91	110	26	40	83.7	4.0	98	28.1	25.0	98
LM Lt Sp	52	30	6	80	274	5.8	6.6	85	108	34	57	83.5	3.8	99	28.7	24.2	93
		31	3	95	316	7.1	8.3	70	97	46	81	81.4	3.9	93	28.4	25.2	98
MEDIUM STAPLE GROUP																	
Southeast					50s		50s		50s		50s						
SLM	41	34	13	99	31	6.3	4.2	110	83	15	11	84.4	3.1	103	27.2	26.2	105
		35	16	107	37	6.2	4.4	101	81	18	13	84.4	3.1	103	27.2	26.0	103
SLM Lt Sp	42	34	4	95	31	5.8	4.2	105	82	17	14	83.7	3.0	102	27.7	25.8	102
LM	51	34	6	94	30	6.0	4.1	100	78	21	16	84.6	3.2	103	27.6	25.9	102
		35	5	105	37	6.4	4.6	102	82	21	15	83.7	3.4	101	27.4	25.8	102
South Central																	
SLM	41	34	5	104	33	6.2	4.2	106	82	15	10	84.6	2.9	105	27.0	25.7	103
		35	71	106	36	6.7	4.7	102	79	17	13	84.5	3.2	103	26.9	26.1	104
		36	9	113	40	6.9	5.0	101	79	16	13	84.6	3.0	104	26.7	26.1	105
SLM Lt Sp	42	35	7	103	34	6.7	4.6	100	77	22	16	84.3	3.5	102	27.3	25.6	102
LM	51	34	9	93	30	5.7	4.0	107	82	15	12	84.3	3.1	103	26.7	25.9	104
		35	20	103	34	6.4	4.5	100	78	23	17	84.5	3.2	103	27.6	25.4	100
Southwest																	
M	31	33	3	106	38	6.3	4.7	97	77	15	12	83.5	2.9	102	26.7	26.5	107
SLM	41	33	3	104	34	7.0	5.0	77	60	32	27	85.3	3.5	104	28.9	24.5	94
		34	14	104	37	6.1	4.5	93	77	19	15	83.5	3.1	101	27.4	26.1	104
SLM Lt Sp	42	32	4	93	29	5.8	4.4	85	78	32	25	83.8	3.3	101	27.4	25.6	101
LM	51	35	5	106	36	6.5	4.6	76	62	35	30	84.2	3.7	101	28.7	24.8	95
West																	
M	31	35	14	118	42	5.8	4.3	104	80	15	11	84.3	3.0	103	26.8	26.1	105
SLM	41	35	32	113	40	5.9	4.4	102	82	16	12	84.0	3.2	102	27.7	25.5	100
		36	11	124	45	6.0	4.6	102	83	18	13	84.5	3.3	103	26.7	25.4	102

Table 3.--Cotton: Average results of fiber and carded yarn processing tests by grade and staple combinations for American upland samples from selected gin points, crop of 1974--(Continued)

Staple group, area, grade and staple			Spinning lots tested	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
				2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
Name	Code	32d in.	No.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
MEDIUM STAPLE GROUP (Continued)															
West															
LM	51	35	3	1.07	43	4.3	88	23	5.8	3.7	3	2	92	6.3	57
LONG STAPLE GROUP															
Southeast															
SLM	41	35	4	1.14	42	4.0	82	23	6.7	3.4	2	3	100	8.1	63
		36	4	1.16	44	4.1	80	22	6.7	3.4	2	3	98	8.2	67
LM	51	35	4	1.14	43	3.7	82	24	7.0	4.6	2	3	96	9.0	75
South Central															
SLM	41	35	3	1.14	43	3.9	83	23	7.2	3.5	1	3	100	8.4	67
West															
SLM	41	36	5	1.17	45	3.8	93	27	5.9	2.7	2	2	99	7.6	87
		37	9	1.16	45	3.6	93	26	5.8	2.7	2	2	99	7.3	89

Table 3.--Continued

Staple group, area, grade and staple			Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
				22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
Name	Code	32d in.	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
MEDIUM STAPLE (Continued)																	
West																	
LM	51	35	3	105	36	6.0	4.5	110	83	18	12	84.2	3.0	103	27.8	25.6	101
LONG STAPLE GROUP																	
Southeast																	
SLM	41	35	4	103	34	6.3	4.6	102	75	23	17	84.0	3.2	102	27.3	26.0	103
		36	4	104	34	6.1	4.4	110	78	17	15	84.6	3.1	104	27.0	26.4	106
LM	51	35	4	110	37	6.5	4.9	100	75	21	18	84.1	3.7	100	27.0	26.1	104
South Central																	
SLM	41	35	3	107	35	6.3	4.6	100	73	19	14	85.2	3.4	104	26.4	25.9	105
West																	
SLM	41	36	5	126	45	6.0	4.7	96	72	18	13	84.2	3.1	103	28.6	25.0	97
		37	9	129	46	6.2	4.8	97	79	21	16	84.5	3.2	103	27.6	25.2	99

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points, crop of 1974

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
SHORT STAPLE	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
Lankart 611															
Northwest Texas	3	89	31.0	.97	44	4.2	82	21	7.0	3.2	4	3	86	6.7	44
Lankart LX-571															
Northwest Texas	6	89	31.5	1.00	43	4.3	83	21	6.2	3.7	3	4	90	7.2	39
MEDIUM STAPLE															
Acala SJ-2															
California	30	96	35.4	1.12	47	4.3	96	27	5.5	2.3	1	3	101	5.8	74
Acala SJ-3															
California	3	95	35.3	1.11	47	4.6	98	28	5.6	2.8	1	3	101	6.4	72
Auburn M															
Missouri	3	92	35.0	1.08	43	3.4	78	22	6.9	2.8	2	3	97	6.0	66
Brycot #4															
Arkansas	3	94	35.0	1.10	44	3.8	86	22	6.2	3.0	2	3	99	5.8	64
Coker 201															
Georgia	3	91	35.0	1.11	45	4.1	79	22	6.4	4.2	2	3	99	6.8	60
North Carolina	3	88	35.3	1.10	46	4.1	81	23	6.5	4.1	2	3	99	7.1	66
South Carolina	3	91	35.0	1.10	45	4.2	82	22	6.4	4.2	2	3	99	6.6	65
Coker 312															
Northwest Texas	3	85	35.0	1.13	42	3.5	85	24	6.1	4.9	2	3	97	7.7	51
Coker 417															
Alabama	4	94	35.0	1.12	44	4.1	90	24	5.5	2.7	2	3	97	5.8	70
Coker 5110															
Northwest Texas	3	88	34.7	1.11	41	3.3	83	22	6.5	3.8	2	3	98	7.2	59
Deltapine 16															
Arkansas	14	92	35.2	1.13	44	4.0	83	23	7.7	3.4	2	2	99	6.5	70
Louisiana	9	93	34.9	1.13	44	4.3	80	23	7.3	2.6	2	2	98	5.6	67
Mississippi	15	93	35.1	1.11	43	3.9	82	23	7.4	2.7	2	2	99	6.0	67
Central Texas	3	91	35.0	1.11	43	4.5	83	22	7.4	2.8	3	2	93	5.6	56
Arizona	3	91	35.7	1.14	44	4.9	84	23	6.8	2.7	3	2	94	5.4	66
Deltapine 25															
Mississippi	3	94	35.0	1.10	44	4.4	87	23	6.4	3.0	2	2	99	6.5	60
Deltapine 61															
California	4	98	34.8	1.08	44	4.6	89	24	6.1	2.0	1	2	103	5.7	56
Dixie King II															
Georgia	3	88	34.0	1.05	46	4.7	82	22	6.5	4.4	3	3	94	7.0	58

Table 4.--Continued

Processing group, variety, and state	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
SHORT STAPLE							Carded Yarns								
Lankart 611			8s		8s		8s		8s						
Northwest Texas	3	93	302	6.7	7.4	90	113	29	43	82.4	5.0	91	27.8	25.2	99
Lankart LX-57															
Northwest Texas	6	88	292	6.3	7.2	93	110	27	42	83.6	3.8	99	28.2	25.0	98
MEDIUM STAPLE															
Acala SJ-2			50s		50s		50s		50s						
California	30	126	47	5.9	4.5	99	81	16	12	84.0	3.2	102	26.8	25.6	103
Acala SJ-3															
California	3	128	49	5.9	4.6	103	80	16	12	83.7	3.2	101	26.7	25.9	104
Auburn M															
Missouri	3	104	35	6.9	4.9	97	80	20	15	84.5	3.4	103	26.8	25.9	104
Brycot #4															
Arkansas	3	106	34	6.3	4.3	93	70	21	17	84.7	3.4	103	27.0	26.3	105
Coker 201															
Georgia	3	102	34	6.3	4.5	107	83	21	13	83.8	3.2	102	26.7	25.8	104
North Carolina	3	111	39	6.5	4.9	103	87	24	16	83.9	3.3	101	26.4	25.8	105
South Carolina	3	107	36	6.4	4.7	103	77	20	14	85.6	3.0	106	26.2	26.4	107
Coker 312															
Northwest Texas	3	107	37	6.2	4.6	70	60	36	33	83.8	3.7	100	28.6	24.7	95
Coker 417															
Alabama	4	112	40	6.0	4.4	92	72	21	15	84.2	3.2	102	28.2	25.0	98
Coker 5110															
Northwest Texas	3	104	35	6.7	4.7	80	63	33	26	84.8	3.7	102	29.2	24.7	94
Deltapine 16															
Arkansas	14	112	39	7.0	5.0	106	81	16	12	84.9	3.0	105	27.0	25.7	103
Louisiana	9	104	35	6.6	4.7	112	86	15	11	84.2	3.0	103	26.7	26.0	105
Mississippi	15	110	38	6.8	4.9	97	78	17	13	84.2	3.0	104	27.4	25.6	102
Central Texas	3	91	28	5.8	4.0	97	77	13	12	82.7	3.6	97	28.2	25.8	101
Arizona	3	105	36	6.5	4.5	107	80	19	13	83.8	3.1	102	27.4	26.0	103
Deltapine 25															
Mississippi	3	106	35	6.2	4.4	107	80	18	14	85.1	3.1	105	27.6	26.2	104
Deltapine 61															
California	4	107	35	5.9	4.2	100	78	17	12	84.7	2.7	106	27.8	26.0	103
Dixie King II															
Georgia	3	101	33	6.0	4.3	110	90	16	13	83.3	3.1	100	27.1	25.7	103

Table 4.--Cotton: Average of classification, fiber tests, and yarn processing tests by variety for samples from selected 100 percent one-variety gin points, crop of 1974--Continued

Processing group, variety, and state	Spinning lots tested	Classification		Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer non-lint	Color of raw stock			Picker & card waste	Spinning Potential
		Grade	Staple	2.5% span	50/2.5 unif.		Zero gage	1/8" gage			Grayness	Yellowness	Composite		
MEDIUM STAPLE (Continued)	No.	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	No.	No.	Index	Pct.	No.
Dixie King III															
Alabama	3	91	34.7	1.07	47	4.4	85	23	6.1	2.8	3	3	95	5.8	65
Mississippi	3	83	34.7	1.03	44	4.6	89	23	5.3	4.0	4	3	89	8.2	54
Lockett BXL															
Northwest Texas	3	86	32.0	1.06	44	4.2	89	25	6.0	4.5	3	3	91	7.9	51
Lockett 4789A															
Northwest Texas	6	92	32.3	1.03	43	3.7	83	22	6.6	3.4	2	3	99	6.8	49
McNair 612															
North Carolina	3	92	35.3	1.11	45	4.1	80	22	6.4	4.7	2	3	98	7.5	66
Stoneville 7A															
Arkansas	3	91	35.0	1.10	41	3.5	88	23	5.8	3.8	2	3	99	7.2	58
Mississippi	3	87	35.0	1.08	45	4.2	91	22	5.3	3.8	2	2	96	7.1	59
Stoneville 213															
Arkansas	18	93	35.0	1.09	44	4.0	84	22	6.5	3.1	2	3	98	6.1	59
Louisiana	6	89	34.7	1.09	45	4.4	84	22	6.4	3.6	2	3	95	7.1	56
Mississippi	18	86	34.7	1.09	45	4.1	84	22	6.3	4.3	2	3	95	7.3	59
Missouri	3	92	35.0	1.11	43	3.9	82	23	7.3	2.7	2	3	98	5.8	62
Arizona	3	94	35.0	1.10	45	5.0	92	22	5.2	3.0	2	2	98	6.7	54
West Texas	3	89	34.0	1.07	43	4.2	78	21	7.0	3.6	3	3	93	7.1	56
Tamcot SP-37															
Central Texas	3	85	30.7	.94	41	3.3	88	19	5.4	4.4	4	3	90	8.7	36
LONG STAPLE															
Acala 1517-C															
West Texas	4	94	36.5	1.17	45	4.0	95	27	5.5	2.8	2	2	98	7.4	88
Coker 310															
Alabama	3	85	35.0	1.15	43	3.5	82	24	7.3	4.8	2	3	97	8.9	80
Georgia	6	91	34.7	1.15	42	4.2	83	23	6.7	4.1	2	3	98	9.0	62
South Carolina	3	91	35.7	1.14	43	4.2	79	22	6.7	3.3	3	3	96	8.4	66
Mississippi	3	91	36.0	1.15	44	4.1	87	23	6.1	4.4	2	3	95	9.3	63
EXTRA LONG STAPLE															
Pima S-4															
Arizona	9	4	44.2	1.47	31	3.7	101	33	6.9	2.9	4	5	89	7.9	
West Texas	7	4	44.0	1.42	34	3.3	99	31	7.2	3.1	5	5	85	8.1	

Table 4.--Continued

Processing group, variety, and state	Spinning lots tested	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color 22s bleached yarn			Color 22s dyed yarn		
		22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	22s or 27 tex	Second number	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	No.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	-b	Index
MEDIUM STAPLE (Continued)															
Dixie King III															
Alabama	3	109	39	6.2	4.4	110	90	13	11	83.7	3.4	101	27.3	26.3	104
Mississippi	3	99	32	5.4	3.8	103	83	20	14	84.6	3.2	104	28.1	25.1	98
Lockett EXL															
Northwest Texas	3	99	32	6.0	4.2	90	77	27	21	83.9	3.2	102	27.8	25.2	99
Lockett 4789A															
Northwest Texas	6	94	29	6.3	4.6	80	68	34	28	84.4	3.4	102	28.0	25.1	98
McNair 612															
North Carolina	3	106	36	6.5	4.6	93	80	33	21	85.2	3.1	105	27.0	26.1	104
Stoneville 7A															
Arkansas	3	99	30	6.0	4.0	87	67	27	22	85.6	3.1	106	27.6	25.6	101
Mississippi	3	100	32	5.4	3.8	110	87	16	12	83.1	3.1	100	28.5	25.3	98
Stoneville 213															
Arkansas	18	101	33	6.3	4.4	99	77	17	13	84.5	3.3	103	27.1	26.0	104
Louisiana	6	96	30	5.8	4.0	107	82	24	16	84.6	3.2	104	27.0	26.0	104
Mississippi	18	102	33	6.2	4.3	103	79	19	14	84.3	3.2	103	26.7	26.0	105
Missouri	3	104	35	6.9	4.7	103	77	16	13	84.1	3.4	102	27.4	26.0	103
Arizona	3	98	32	5.2	3.8	117	90	13	10	84.6	3.1	104	28.3	25.5	99
West Texas	3	97	32	6.4	4.2	97	77	15	11	84.4	3.8	100	28.0	25.4	100
Tamcot SP-37															
Central Texas	3	69	19	4.5	4.0	73	63	28	26	82.1	3.8	95	29.3	25.0	96
LONG STAPLE															
Acala 1517-C															
West Texas	4	126	45	6.0	4.7	100	80	18	15	84.0	3.1	102	28.2	25.2	98
Coker 310															
Alabama	3	115	40	6.8	5.2	97	70	21	18	83.9	3.7	100	26.8	25.9	104
Georgia	6	101	33	6.0	4.5	103	78	22	16	84.1	3.2	102	27.2	26.1	104
South Carolina	3	100	32	6.0	4.3	110	83	16	13	85.5	3.2	106	27.3	26.6	106
Mississippi	3	104	33	5.8	4.2	103	80	18	15	84.3	3.1	103	26.7	26.0	104
EXTRA LONG STAPLE						Combed Yarns									
Pima S-4															
Arizona	9	65	35	5.6	4.7	112	116	1	1	84.0	3.6	100	29.0	25.5	98
West Texas	7	63	34	5.5	4.7	107	110	3	3	84.4	3.8	100	28.2	25.3	99

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1974

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
CENTRAL TEXAS														
BYERS			LANKART 611				98 PERCENT							
LM	51	30	0.97	46	4.5	84	22	6.7	2.3	3.9	3	3	91	7.2
SLM LT SP	42	30	0.97	45	4.3	82	21	6.7	2.9	3.7	4	3	90	7.1
SLM LT SP	42	30	0.97	46	4.7	86	22	5.9	2.6	3.4	4	3	87	7.9
TAYLOR			LANKART 57				85 PERCENT							
SLM LT SP	42	30	0.95	45	4.1	85	22	6.2	2.4	3.1	3	4	92	6.2
SLM LT SP	42	30	0.94	45	4.0	84	20	6.1	2.9	3.8	3	4	96	6.2
LM LT SP	52	30	0.95	43	4.0	84	20	5.7	2.3	3.6	6	3	77	6.8
WACO			LANKART LX 571				95 PERCENT							
SLM	41	32	0.99	46	4.4	88	24	5.8	2.3	3.0	2	4	99	6.6
M	31	32	1.00	45	4.5	92	23	6.0	1.8	2.6	1	4	102	6.4
LM LT SP	52	33	1.03	45	4.4	92	22	5.8	4.0	5.3	5	4	85	7.3
WAXAHACHIE			LANKART 57				95 PERCENT							
SLM LT SP	42	30	0.90	42	3.7	85	18	5.6	2.2	3.6	4	4	87	7.0
LM LT SP	52	29	0.89	43	4.2	89	18	5.2	1.9	3.6	6	3	80	7.6
LM LT SP	52	29	0.90	43	4.1	86	18	5.3	2.6	4.1	6	3	80	8.2
WAXAHACHIE			LANKART LX 571				95 PERCENT							
M LT SP	32	30	0.93	43	3.7	91	19	5.0	1.8	3.1	2	4	99	6.9
SLM LT SP	42	31	0.91	42	3.6	87	17	5.6	2.1	3.3	4	4	90	6.6
LM LT SP	52	30	0.91	43	4.1	86	18	5.2	2.0	3.1	5	4	84	7.8
NORTHWEST TEXAS														
ANSON			LANKART 611				100 PERCENT							
SLM LT SP	42	31	0.98	44	4.5	80	21	7.0	1.4	2.2	4	4	88	6.1
SLM LT SP	42	31	0.98	45	4.1	82	21	7.2	2.2	3.5	5	3	84	7.0
SLM LT SP	42	31	0.96	43	4.1	83	21	6.7	2.3	3.9	4	3	86	6.9
BURKBURNETT			LANKART LX 571				100 PERCENT							
SLM LT SP	42	31	0.95	44	5.2	85	22	5.7	2.3	3.6	4	4	85	8.9
SLM LT SP	42	31	0.99	44	4.4	90	22	5.8	2.1	3.7	4	3	89	6.5
SLM LT SP	42	31	0.97	44	4.6	82	20	5.9	1.9	3.7	3	4	91	7.4

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area Chronological sampling and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Potential	Color - 22s gray yarn			Color-22s blchd.yarn			Color - 22s dyed yarn		
Grade	Staple	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST																			
CENTRAL TEXAS																			
BYERS			LANKART 611					98 PERCENT											
LM 51	30	306	96	6.9	6.2	130	110	32	17	44	69.0	11.0	94	84.2	3.9	100	28.0	25.1	98
SLM LT SP 42	30	292	88	7.1	6.4	120	100	31	19	40	64.8	10.8	85	83.3	3.5	99	27.4	25.8	102
SLM LT SP 42	30	293	87	6.8	6.0	120	100	28	18	36	64.8	10.7	85	82.7	4.6	93	29.9	24.8	93
TAYLOR			LANKART 57					85 PERCENT											
SLM LT SP 42	30	278	92	7.2	5.8	120	110	21	15	44	64.8	12.0	88	83.1	3.1	100	27.0	26.6	106
SLM LT SP 42	30	311	92	7.1	6.0	120	120	16	11	41	65.0	11.5	87	81.2	3.3	95	27.2	26.3	105
LM LT SP 52	30	261	79	6.2	5.4	120	100	32	16	33	58.7	10.4	74	82.0	3.6	96	30.2	24.2	90
WACO			LANKART LX 571					95 PERCENT											
SLM 41	32	316	104	7.3	6.3	130	120	14	9	52	67.7	12.2	96	82.7	3.1	99	27.3	26.1	104
M 31	32	309	100	7.7	6.2	130	120	10	9	43	69.4	12.3	99	83.8	3.1	102	26.8	27.1	109
LM LT SP 52	33	315	105	6.8	6.4	120	100	42	26	52	62.2	12.0	83	81.3	4.1	92	28.5	25.1	97
WAXAHACHIE			LANKART 57					95 PERCENT											
SLM LT SP 42	30	256	74	5.8	4.8	120	100	28	25	32	65.5	11.5	88	80.1	3.0	94	28.7	25.2	97
LM LT SP 52	29	239	68	5.6	4.9	110	80	38	20	30	61.2	11.1	79	82.7	3.7	97	29.1	24.4	93
LM LT SP 52	29	231	63	5.4	4.5	120	80	33	18	27	60.5	10.9	78	83.3	3.7	98	29.9	24.0	90
WAXAHACHIE			LANKART LX 571					95 PERCENT											
M LT SP 32	30	295	83	6.8	5.3	120	90	14	15	34	66.7	12.3	94	82.5	3.0	99	27.6	26.0	103
SLM LT SP 42	31	275	84	6.4	5.4	120	80	32	23	36	64.6	11.9	87	82.4	3.1	99	28.9	25.2	97
LM LT SP 52	30	256	74	5.6	4.9	110	80	37	22	32	61.0	11.1	79	87.6	3.6	109	28.4	24.4	95
NORTHWEST TEXAS																			
ANSON			LANKART 611					100 PERCENT											
SLM LT SP 42	31	298	94	7.1	6.6	120	90	32	20	45	63.4	11.0	83	81.6	5.4	88	26.9	24.7	99
SLM LT SP 42	31	300	91	7.6	6.7	110	90	47	26	43	64.9	11.3	86	81.5	5.1	89	28.0	25.1	98
SLM LT SP 42	31	307	93	7.5	6.8	110	90	51	25	43	67.8	10.3	89	84.0	4.6	96	28.6	25.8	100
BURKBURNETT			LANKART LX 571					100 PERCENT											
SLM LT SP 42	31	259	80	6.4	5.4	110	90	39	33	31	63.4	11.1	83	85.5	3.6	104	28.5	24.5	95
SLM LT SP 42	31	275	82	6.5	5.7	120	90	42	23	33	70.1	10.6	95	82.9	3.9	97	28.8	24.4	94
SLM LT SP 42	31	294	85	7.6	6.3	120	80	41	22	37	64.8	11.4	86	82.8	3.8	97	27.1	25.5	102

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling and Classification		Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST													
NORTHWEST TEXAS													
HART		STRIPPER 31				90 PERCENT							
1/ LM LT SP 52	32	0.96	43	2.6	80	22	6.8	4.6	6.4	2	4	97	9.1
1/ LM LT SP 52	31	0.96	42	2.5	75	20	7.5	4.5	6.9	3	4	95	8.6
1/ LM LT SP 52	30	0.95	45	2.6	82	21	6.8	3.3	5.0	3	4	96	9.4
KNOTT		WESTERN STORMPROOF				90 PERCENT							
SLM LT SP 42	30	0.94	45	3.9	80	19	5.5	3.2	5.0	4	4	89	8.4
M SP 33	30	0.94	43	3.6	83	19	5.2	2.0	3.4	3	4	93	7.4
M LT SP 32	31	0.95	45	3.9	83	20	6.2	1.8	3.2	2	4	97	6.6
PADUCAH		LANKART 611				90 PERCENT							
M 31	31	0.97	43	3.9	80	20	6.9	0.7	2.0	2	4	100	5.4
M LT SP 32	31	0.96	43	3.6	78	21	7.1	1.8	3.3	2	4	97	5.9
SLM LT SP 42	31	1.00	42	3.3	74	20	7.2	2.2	3.6	3	4	91	6.6
PLAINVIEW		PAYMASTER 18				90 PERCENT							
SLM LT SP 42	31	0.96	42	2.7	78	20	7.0	2.5	4.0	2	4	100	7.1
SLM LT SP 42	31	0.97	40	2.7	79	20	6.7	2.5	4.0	2	4	97	7.4
1/ LM LT SP 52	31	0.94	45	2.5	73	21	7.5	4.3	6.7	2	4	99	8.6
RALLS		STRIPPER 31				90 PERCENT							
1/ LM LT SP 52	31	0.95	42	3.0	77	20	7.4	4.5	6.9	3	3	95	7.9
LM 51	31	0.98	44	2.8	79	22	6.4	4.3	6.2	2	3	99	8.1
1/ LM LT SP 52	30	0.94	41	2.4	78	21	7.4	4.2	6.3	2	4	99	9.4
RULE		LANKART LX 571				100 PERCENT							
SLM LT SP 42	32	1.01	43	4.6	83	21	5.5	2.2	3.4	4	4	87	7.2
SLM LT SP 42	32	1.01	42	3.4	81	21	7.1	2.4	3.9	2	3	96	6.6
SLM LT SP 42	32	1.05	43	3.8	77	22	7.2	2.8	4.0	3	3	93	6.5
SEAGRAVES		PAYMASTER 18				83 PERCENT							
2/ LM 51	30	0.93	46	3.7	78	19	6.1	1.9	3.2	2	3	99	5.6
SLM LT SP 42	29	0.91	46	4.1	81	20	6.2	1.5	3.1	2	3	96	7.2
2/ LM 51	29	0.90	45	3.3	77	19	6.3	2.2	4.2	2	3	98	8.0

1/ Reduced from 42 because of bark
2/ Reduced from 41 because of bark

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area Chronological sampling and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd.yarn			Color - 22s dyed yarn		
Grade	Staple	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST																			
NORTHWEST TEXAS																			
HART			STRIPPER 31						90 PERCENT										
1/ LM LT SP 52	32	336	101	8.6	7.5	100	70	98	58	46	69.9	11.8	98	85.5	4.1	102	27.0	24.6	98
1/ LM LT SP 52	31	322	98	8.6	7.3	80	70	99	59	44	69.5	13.2	103	76.3	3.9	81	28.4	25.0	97
1/ LM LT SP 52	30	320	97	8.3	7.2	90	80	68	40	43	68.1	12.3	97	82.5	3.7	97	28.1	23.4	91
KNOTT			WESTERN STORMPROOF						90 PERCENT										
SLM LT SP 42	30	261	82	6.2	5.3	120	100	32	16	35	64.2	11.6	86	83.4	4.7	95	29.0	24.5	94
M SP 33	30	280	81	6.2	5.3	130	90	25	12	35	64.3	11.4	85	82.7	4.6	93	28.4	25.3	98
M LT SP 32	31	310	97	7.5	6.6	130	110	30	17	40	69.0	11.1	94	85.6	4.0	103	29.2	24.7	94
PADUCAH			LANKART 611						90 PERCENT										
M 31	31	314	92	7.8	6.7	120	100	25	14	40	68.9	11.4	95	82.4	3.6	97	29.3	25.4	97
M LT SP 32	31	300	92	7.6	6.7	110	90	49	29	39	66.4	11.6	90	83.4	3.7	99	28.5	26.0	101
SLM LT SP 42	31	293	85	7.5	7.1	70	100	86	46	41	64.8	11.8	87	83.0	3.9	97	26.6	25.9	104
PLAINVIEW			PAYMASTER 18						90 PERCENT										
SLM LT SP 42	31	324	100	8.6	7.4	100	80	59	39	46	68.4	12.2	97	85.4	4.0	102	26.8	24.8	100
SLM LT SP 42	31	319	98	8.6	7.3	90	70	79	49	42	67.6	11.5	93	82.8	4.8	93	29.3	23.8	91
1/ LM LT SP 52	31	319	92	8.0	6.9	100	70	83	37	40	66.7	12.5	95	85.0	3.8	102	28.4	25.0	97
RALLS			STRIPPER 31						90 PERCENT										
1/ LM LT SP 52	31	308	96	8.2	7.0	110	70	60	41	45	66.6	11.3	90	83.0	4.1	96	28.5	25.5	99
LM 51	31	328	103	8.2	7.6	100	70	61	42	51	67.7	11.8	94	84.4	3.7	101	28.5	24.8	96
1/ LM LT SP 52	30	316	96	8.2	7.2	90	60	103	71	39	70.3	12.3	101	82.8	3.6	98	28.4	23.2	90
RULE			LANKART LX 571						100 PERCENT										
SLM LT SP 42	32	294	92	7.0	6.2	120	110	26	21	42	63.8	11.1	84	83.4	4.2	97	27.8	24.8	98
SLM LT SP 42	32	309	96	7.5	7.2	120	80	59	31	47	69.1	11.6	96	83.9	3.7	100	28.4	25.4	99
SLM LT SP 42	32	319	94	8.2	7.1	70	110	48	30	44	65.2	11.2	87	83.0	3.8	97	28.6	25.2	98
SEAGRAVES			PAYMASTER 18						83 PERCENT										
2/ LM 51	30	301	89	7.5	6.8	120	90	35	24	40	68.3	10.7	91	83.0	3.5	98	28.3	25.9	101
SLM LT SP 42	29	256	74	6.2	5.4	110	90	31	17	29	66.1	11.2	88	82.6	4.7	93	28.3	25.4	99
2/ LM 51	29	287	83	7.2	6.4	120	90	44	24	33	68.3	11.2	93	84.5	3.3	103	28.6	25.4	98

1/ Reduced from 42 because of bark
2/ Reduced from 41 because of bark

Table 5.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
NORTHWEST TEXAS														
SNYDER			WESTERN STORMPROOF 44				75 PERCENT							
SLM LT SP	42	31	1.00	43	3.9	87	21	5.6	1.9	3.0	4	4	90	6.5
SLM LT SP	42	32	1.02	42	3.5	89	23	6.1	2.2	3.6	2	4	97	6.3
SLM LT SP	42	32	0.99	43	3.7	84	23	5.8	3.0	4.0	4	4	89	6.5
TULIA			STRIPPER 31				90 PERCENT							
SLM LT SP	42	31	0.94	44	3.1	84	22	6.4	2.7	4.5	2	4	98	7.6
SLM LT SP	42	31	0.94	46	3.1	81	21	6.6	4.0	5.8	2	4	98	8.4
SLM LT SP	42	31	0.95	44	3.1	80	21	6.9	3.2	5.0	2	3	98	8.0
OKLAHOMA														
CARNEGIE			LANKART 57				94 PERCENT							
SLM	41	32	1.01	44	4.5	82	21	6.6	2.0	3.1	2	3	98	6.5
SLM LT SP	42	32	1.02	44	4.2	79	23	6.9	2.2	3.8	2	4	97	7.0
SLM LT SP	42	33	1.03	45	3.8	77	21	7.1	2.4	3.9	2	4	97	7.4
DAVIDSON			LANKART 57				95 PERCENT							
SLM LT SP	42	32	0.98	44	4.8	84	22	6.4	2.8	3.7	3	4	93	7.7
SLM	41	32	1.02	45	4.4	83	21	6.9	2.1	3.0	2	3	100	6.0
SLM LT SP	42	32	1.03	44	4.0	84	22	6.1	2.3	3.8	3	4	95	7.2
TERRAL			LANKART 57				90 PERCENT							
SLM LT SP	42	30	0.99	43	4.7	88	22	5.4	1.8	3.3	4	3	87	7.3
LM LT SP	52	30	0.91	43	4.5	82	20	5.6	1.7	2.7	5	3	82	7.6
LM LT SP	52	30	0.95	44	4.9	81	20	5.8	2.4	3.6	6	4	80	7.8

Table 5a.--Cotton, American upland short staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area Chronological sampling and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd.yarn			Color - 22s dyed yarn		
Grade	Staple		8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex	8s or 74 tex	22s or 27 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	R_d	+b	Index	R_d	+b	Index	R_d	-b	Index
SOUTH WEST																				
NORTHWEST TEXAS																				
SNYDER				WESTERN STORMPROOF 44					75 PERCENT											
	SLM LT SP 42	31	313	98	7.2	6.2	120	100	43	23	43	69.4	11.1	95	80.3	4.8	87	27.7	23.7	93
	SLM LT SP 42	32	333	105	7.1	6.5	120	90	43	27	48	65.4	11.5	88	84.1	4.6	97	29.3	24.0	91
	SLM LT SP 42	32	322	100	7.2	6.5	110	80	22	15	45	63.8	11.9	86	83.2	4.8	94	27.8	24.3	96
TULIA				STRIPPER 31					90 PERCENT											
	SLM LT SP 42	31	311	94	8.0	7.2	110	70	46	32	42	63.6	12.1	86	83.4	3.7	99	27.5	24.9	99
	SLM LT SP 42	31	326	100	8.3	7.1	110	90	39	29	47	65.8	12.0	90	84.6	3.7	101	26.8	25.3	102
	SLM LT SP 42	31	327	99	8.3	6.8	110	110	40	20	44	67.3	12.0	94	84.3	3.9	100	28.0	25.3	99
OKLAHOMA																				
CARNEGIE				LANKART 57					94 PERCENT											
	SLM 41	32	312	98	7.6	6.7	120	90	45	33	46	69.2	10.9	94	82.7	2.9	100	26.3	25.3	103
	SLM LT SP 42	32	312	95	7.6	6.4	110	90	43	18	46	67.8	11.4	93	84.3	3.6	101	27.5	25.8	102
	SLM LT SP 42	33	314	91	8.0	7.3	110	70	64	42	47	66.3	11.5	90	83.4	3.8	98	26.3	25.8	105
DAVIDSON				LANKART 57					95 PERCENT											
	SLM LT SP 42	32	301	91	7.3	6.3	120	90	35	31	42	62.8	11.1	82	83.6	3.8	99	27.9	25.3	99
	SLM 41	32	315	97	8.0	6.6	130	100	34	20	45	67.3	11.1	90	83.4	3.3	100	25.8	25.8	106
	SLM LT SP 42	32	317	98	8.0	7.0	110	80	47	32	46	65.7	11.4	88	83.8	3.4	101	27.8	25.2	99
TERRAL				LANKART 57					90 PERCENT											
	SLM LT SP 42	30	273	83	6.0	5.4	120	110	35	21	34	68.3	10.6	91	84.0	3.6	100	28.3	25.1	98
	LM LT SP 52	30	249	70	5.9	5.2	120	90	68	38	26	63.2	10.9	82	82.8	4.5	94	28.9	24.5	94
	LM LT SP 52	30	244	66	5.5	5.0	120	100	32	15	25	61.6	10.9	79	83.4	3.7	99	28.4	25.2	98

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST														
ALABAMA														
GREENBRIER			STONEVILLE 213				98 PERCENT							
SLM	41	34	1.09	45	4.6	80	23	7.5	1.8	2.6	1	3	102	5.2
SLM	41	34	1.09	45	4.4	80	21	8.2	1.7	2.1	1	3	102	5.7
LM	51	33	1.04	42	4.0	78	22	7.2	1.8	2.4	2	3	100	5.7
HARPERSVILLE			DELTAPINE 16				90 PERCENT							
SLM	41	34	1.10	45	4.4	78	22	7.9	1.3	2.3	2	3	99	5.0
SLM	41	35	1.13	45	4.4	83	23	6.4	1.7	2.4	2	3	98	6.0
LM	51	35	1.14	45	4.6	83	23	6.7	2.6	3.6	2	2	97	6.2
PRATTVILLE			COKER 417				100 PERCENT							
SLM	41	35	1.11	46	4.1	92	26	5.0	2.2	2.7	2	3	97	5.1
SLM	41	35	1.13	45	4.2	91	24	5.9	1.9	2.9	2	3	98	6.1
SLM	41	35	1.13	44	4.2	90	24	5.6	1.5	2.5	2	3	98	5.6
SLM	41	35	1.11	43	4.0	86	23	5.5	1.7	2.6	2	3	96	6.5
SECTION			STONEVILLE 603				75 PERCENT							
LM	51	35	1.10	45	4.3	80	22	6.1	3.9	4.8	2	2	96	6.6
LM	51	34	1.10	42	3.5	79	23	6.6	2.9	4.0	1	3	100	6.8
SLM	41	34	1.08	43	3.4	78	21	6.7	2.6	4.0	2	3	100	6.4
ST. CLAIR			STONEVILLE 213				85 PERCENT							
SLM	41	34	1.05	46	5.1	86	23	6.1	1.6	2.1	3	3	94	5.6
SLM	41	34	1.07	46	4.6	82	21	6.9	1.8	3.0	2	3	97	7.4
LM	51	34	1.09	45	4.5	79	23	7.0	2.0	3.0	2	3	98	7.2
SLM	41	34	1.08	45	4.3	79	21	6.4	1.9	2.8	2	3	99	6.4
SYLACAUGA			DIXIE KING III				100 PERCENT							
SLM	41	34	1.06	47	4.5	86	23	6.2	1.8	2.4	2	3	96	5.7
SLM	41	35	1.07	47	4.3	88	22	6.4	1.4	2.1	3	3	96	5.6
LM	51	35	1.08	47	4.3	82	23	5.8	2.8	3.8	3	2	92	6.1
TUSKEGEE			DELTAPINE 16				95 PERCENT							
SLM	41	34	1.09	44	4.2	83	23	7.2	1.7	2.5	2	3	99	5.3
SLM	41	34	1.07	45	4.5	79	22	8.0	1.5	2.4	2	3	97	5.7
SLM LT SP	42	34	1.08	43	4.3	78	22	7.4	2.0	3.2	2	3	99	6.2

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EAST																				
ALABAMA																				
GREENBRIER				STONEVILLE 213						98 PERCENT										
SLM	41	34	99	31	6.3	4.3	110	90	21	14	62	70.0	11.8	99	85.1	2.9	106	26.0	27.4	112
SLM	41	34	104	34	7.3	4.9	90	70	19	14	60	68.9	11.4	95	85.8	3.7	104	26.0	26.1	106
LM	51	33	96	30	6.7	4.6	90	80	18	16	51	70.1	10.6	95	84.2	3.6	101	28.3	25.1	98
HARPERSVILLE				DELTAPINE 16						90 PERCENT										
SLM	41	34	98	31	6.4	4.3	120	90	11	8	63	67.0	10.8	89	85.5	2.8	107	25.2	26.9	111
SLM	41	35	105	36	6.6	4.8	90	80	14	12	61	66.6	10.3	87	83.7	3.1	102	26.8	27.3	110
LM	51	35	112	40	6.5	4.7	120	90	12	9	68	67.7	10.1	88	83.9	2.9	103	26.1	26.8	109
PRATTVILLE				COKER 417						100 PERCENT										
SLM	41	35	113	41	5.8	4.2	90	70	27	20	76	66.6	11.3	90	82.4	3.4	97	27.9	25.7	101
SLM	41	35	113	41	6.3	4.5	90	70	22	15	73	66.6	10.9	88	84.8	3.4	103	27.5	24.8	98
SLM	41	35	115	41	6.2	4.5	100	80	18	11	69	67.5	10.4	89	85.7	3.0	107	27.8	24.8	98
SLM	41	35	107	37	5.6	4.4	90	70	16	15	61	67.1	10.5	88	84.0	3.2	102	29.8	24.6	93
SECTION				STONEVILLE 603						75 PERCENT										
LM	51	35	112	39	6.6	4.8	90	80	22	14	62	67.7	10.8	90	84.3	3.6	101	27.4	26.0	103
LM	51	34	110	37	7.0	5.0	90	70	27	19	67	68.8	11.0	94	83.9	3.4	101	27.2	25.2	100
SLM	41	34	105	35	7.1	4.8	100	70	20	17	68	68.4	10.8	92	83.8	3.5	100	28.5	25.2	98
ST. CLAIR				STONEVILLE 213						85 PERCENT										
SLM	41	34	88	24	5.3	3.3	120	100	9	6	53	66.8	11.2	90	82.4	3.2	98	27.7	26.5	105
SLM	41	34	90	27	6.2	3.7	110	80	16	14	52	68.0	10.4	90	86.3	2.9	109	27.3	25.6	102
LM	51	34	100	33	6.2	4.7	100	80	18	15	59	67.9	10.5	90	85.0	3.2	104	27.1	26.3	105
SLM	41	34	98	30	6.7	4.1	90	80	15	11	58	70.6	10.3	95	84.9	2.8	106	29.1	26.3	101
SYLACAUGA				DIXIE KING III						100 PERCENT										
SLM	41	34	109	38	6.2	4.4	110	90	12	9	66	66.3	10.7	87	84.6	3.3	103	25.8	26.7	109
SLM	41	35	112	41	6.2	4.5	110	90	11	10	69	66.1	11.0	88	82.5	3.1	99	28.2	25.9	101
LM	51	35	105	37	6.2	4.4	110	90	15	13	61	66.3	9.8	85	84.1	3.8	100	27.8	26.2	103
TUSKEGEE				DELTAPINE 16						95 PERCENT										
SLM	41	34	106	34	6.4	4.4	120	90	10	7	68	69.0	11.0	94	83.8	3.3	101	27.1	26.3	105
SLM	41	34	98	32	6.8	4.3	120	90	11	8	61	66.8	10.3	87	87.2	2.8	111	27.4	26.0	103
SLM LT SP	42	34	101	35	6.3	4.7	110	80	19	15	58	68.0	10.3	89	84.7	2.8	105	28.0	25.9	102

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST														
ALABAMA														
TYLER			COKER 201				80 PERCENT							
SLM	41	35	1.15	45	4.7	86	23	6.3	1.7	2.5	3	3	96	5.0
SLM	41	35	1.10	46	4.3	82	22	6.6	1.4	2.2	2	3	98	5.9
LM	51	35	1.09	43	4.1	78	21	6.1	3.4	4.2	4	2	86	7.2
GEORGIA														
ALLENTOWN			COKER 201				95 PERCENT							
SLM	41	34	1.07	47	4.7	79	23	6.1	2.2	2.6	2	3	96	4.8
LM	51	34	1.07	43	4.7	78	21	6.3	4.4	5.6	4	3	89	8.8
SLM LT SP	42	34	1.09	43	4.5	77	21	6.1	2.2	3.4	3	3	90	7.6
LM	51	34	1.07	41	4.4	77	20	6.0	3.2	4.8	4	3	87	9.5
BOSTWICK			DIXIE KING II				100 PERCENT							
SLM LT SP	42	34	1.05	46	4.8	82	21	6.8	2.8	3.9	3	4	94	6.4
SLM LT SP	42	34	1.05	46	4.6	82	21	6.4	3.9	4.9	3	3	94	7.3
LM	51	34	1.06	47	4.6	81	23	6.4	3.1	4.3	3	3	94	7.2
COMER			COKER 201				100 PERCENT							
SLM	41	35	1.12	46	4.4	82	22	6.8	3.0	3.8	2	3	99	6.3
SLM	41	35	1.09	45	4.1	77	22	6.2	3.3	4.4	2	3	100	6.7
LM	51	35	1.11	43	3.8	78	21	6.1	3.4	4.3	2	3	97	7.4
OGLETHORPE			DELTAPINE 16				98 PERCENT							
SLM	41	34	1.09	43	4.5	80	21	7.6	1.6	2.6	2	3	98	6.0
SLM	41	34	1.07	43	4.3	80	22	7.8	1.8	2.7	2	3	98	6.3
LM	51	34	1.02	43	4.1	79	21	6.1	2.6	3.7	2	3	96	7.8
NORTH CAROLINA														
LAURINBURG			MCNAIR 612				100 PERCENT							
SLM	41	35	1.12	45	4.2	83	23	6.6	2.6	3.6	2	3	100	6.9
SLM	41	36	1.11	45	4.3	79	22	6.0	3.8	4.8	2	2	99	7.6
SLM LT SP	42	35	1.10	45	3.9	78	22	6.5	4.8	5.6	3	3	96	8.0
SHELBY			COKER 201				100 PERCENT							
SLM	41	35	1.11	46	4.0	76	23	6.5	2.2	2.8	1	3	102	6.4
LM LT SP	52	36	1.12	46	3.9	84	23	6.8	3.0	4.8	3	3	95	8.6
SLM LT SP	42	35	1.08	45	4.4	82	22	6.3	3.5	4.6	2	3	99	6.2

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EAST																				
ALABAMA																				
TYLER				COKER 201						80 PERCENT										
SLM		41 35	107	37	6.1	4.5	130	90	7	7	72	67.1	11.2	90	84.6	3.1	104	27.2	26.4	105
SLM		41 35	104	37	6.0	4.4	100	90	15	10	66	67.7	10.2	89	86.9	3.3	108	28.3	24.8	97
LM		51 35	96	33	5.9	4.2	100	80	24	17	60	68.2	9.8	88	82.9	2.9	101	28.1	24.4	95
GEORGIA																				
ALLENTOWN				COKER 201						95 PERCENT										
SLM		41 34	93	30	5.2	3.8	100	70	23	19	53	67.5	11.2	91	83.1	3.1	100	27.8	26.3	104
LM		51 34	78	22	5.3	3.5	110	90	17	13	48	64.6	11.2	85	85.6	3.1	106	27.7	26.6	105
SLM LT SP		42 34	80	24	5.4	3.7	90	70	19	16	43	64.5	10.5	84	85.7	3.3	106	28.6	25.8	100
LM		51 34	81	24	5.5	3.2	90	60	23	20	46	65.7	10.3	85	83.6	3.1	102	28.1	26.1	102
BOSTWICK				DIXIE KING II						100 PERCENT										
SLM LT SP		42 34	96	30	5.8	4.2	120	90	17	14	60	66.0	11.9	90	82.0	3.2	97	26.8	26.3	106
SLM LT SP		42 34	102	34	5.9	4.1	100	90	12	11	53	69.6	11.2	96	82.5	2.8	100	27.5	25.1	99
LM		51 34	104	36	6.3	4.5	110	90	20	14	61	68.0	10.7	91	85.3	3.4	104	27.1	25.7	103
COMER				COKER 201						100 PERCENT										
SLM		41 35	102	34	6.0	4.3	110	100	11	9	63	69.9	11.2	97	85.9	3.0	107	25.9	26.1	107
SLM		41 35	103	34	6.3	4.3	120	80	17	10	58	69.6	10.7	94	82.5	2.9	100	26.9	25.8	103
LM		51 35	101	35	6.7	4.8	90	70	34	21	58	68.0	10.7	91	83.1	3.6	98	27.4	25.6	102
OGLETHORPE				DELTAPINE 16						98 PERCENT										
SLM		41 34	99	32	6.4	4.5	120	90	13	10	63	69.5	11.4	97	83.1	2.9	101	27.6	26.4	104
SLM		41 34	95	30	6.0	4.0	120	70	14	9	47	68.3	10.6	91	82.2	2.8	99	28.0	25.4	100
LM		51 34	88	28	5.9	3.9	100	80	19	14	47	69.1	10.2	91	84.4	3.1	103	28.6	25.3	98
NORTH CAROLINA																				
LAURINBURG				MCNAIR 612						100 PERCENT										
SLM		41 35	108	36	6.4	4.4	100	80	23	16	71	70.0	11.3	97	85.6	2.9	107	27.0	27.3	109
SLM		41 36	108	37	6.7	4.6	90	80	39	24	66	66.9	10.3	87	84.2	3.3	102	27.0	25.3	101
SLM LT SP		42 35	102	35	6.5	4.8	90	80	38	22	61	69.3	11.2	96	85.9	3.1	107	26.9	25.6	103
SHELBY				COKER 201						100 PERCENT										
SLM		41 35	117	41	6.6	4.7	100	80	14	11	72	66.9	10.3	87	83.5	3.5	100	25.9	26.1	107
LM LT SP		52 36	113	41	6.7	5.2	100	90	32	19	67	67.0	11.5	91	83.5	3.2	101	27.2	25.5	102
SLM LT SP		42 35	104	36	6.1	4.7	110	90	27	17	60	66.5	11.1	89	84.7	3.3	103	26.1	25.8	105

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Grayness	Yellowness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST														
SOUTH CAROLINA														
CALHOUN FALLS			COKER 201				100 PERCENT							
SLM	41	35	1.11	45	4.1	82	23	6.1	2.9	3.9	2	2	100	5.4
LM+	50	35	1.09	45	4.2	83	20	6.9	3.6	4.4	2	3	97	6.9 1/
LM+	50	35	1.11	46	4.4	81	22	6.3	3.5	4.4	2	3	100	7.4
ST MATTHEWS			COKER 201				98 PERCENT							
SLM	41	35	1.13	45	4.5	79	22	6.1	2.6	3.6	2	3	98	6.0
SLM	41	35	1.14	45	4.6	82	20	6.9	2.4	3.3	2	3	97	6.3
SLM	41	35	1.11	44	4.7	78	21	6.0	2.3	3.1	1	3	101	6.4
SOUTH CENTRAL														
ARKANSAS														
ALTHEIMER			DELTAPINE 16				100 PERCENT							
SLM	41	36	1.17	45	4.5	87	24	7.2	1.6	2.7	2	2	100	5.4
SLM	41	36	1.17	46	4.5	81	24	8.5	2.1	3.5	1	2	101	6.9
LM	51	35	1.11	42	3.4	85	21	7.3	2.0	4.3	3	2	95	6.1
LM	51	35	1.11	43	3.5	81	21	7.5	3.6	5.0	2	2	97	7.2
DUMAS			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.11	45	4.6	86	22	5.6	2.1	2.8	2	3	97	5.7
SLM	41	35	1.10	43	4.1	86	22	5.7	2.0	3.1	2	3	100	6.4
SLM	41	35	1.06	44	3.4	86	21	5.9	1.7	2.6	2	2	99	6.0
SLM	41	35	1.07	42	3.4	85	20	5.9	2.5	3.9	2	2	98	6.2
EUDORA			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.11	44	4.2	89	23	7.3	1.4	2.5	1	2	101	5.6
SLM	41	35	1.11	45	4.5	80	23	8.0	2.0	3.1	1	2	101	7.1
SLM	41	35	1.10	44	4.3	84	22	6.9	1.6	3.0	2	2	96	7.4
SLM	41	34	1.09	44	3.9	78	20	7.3	1.8	3.5	2	2	98	5.8
HUGHES			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.12	45	4.3	90	24	6.6	2.2	3.1	2	3	98	5.8
SLM	41	35	1.10	45	4.3	83	23	6.9	1.5	2.5	2	3	100	6.1
SLM	41	35	1.11	44	4.4	84	23	6.3	1.1	2.0	2	3	98	5.2
LM	51	35	1.06	41	3.0	80	21	6.8	1.8	3.6	2	2	98	5.6

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EAST																				
SOUTH CAROLINA																				
CALHOUN FALLS			COKER 201						100 PERCENT											
SLM	41	35	108	34	6.2	4.3	110	80	18	14	68	70.0	10.6	95	85.2	2.8	106	25.3	27.1	112
LM+	50	35	109	39	6.4	5.0	100	70	17	11	66	69.3	10.7	94	85.9	3.1	107	25.4	26.7	110
LM+	50	35	104	35	6.5	4.7	100	80	25	17	61	69.6	10.4	93	85.6	3.1	106	27.9	25.5	100
ST MATTHEWS			COKER 201						98 PERCENT											
SLM	41	35	97	30	6.2	4.1	90	80	29	23	60	67.9	11.0	92	85.1	2.9	106	26.1	26.5	108
SLM	41	35	102	35	6.5	4.7	90	80	22	14	63	69.0	10.5	92	84.1	3.4	101	28.1	25.6	100
SLM	41	35	99	34	6.2	4.2	100	70	20	16	58	70.0	10.4	94	84.7	3.2	104	27.0	26.4	106
SOUTH CENTRAL																				
ARKANSAS																				
ALTHEIMER			DELTAPINE 16						100 PERCENT											
SLM	41	36	111	37	6.6	4.7	110	80	16	13	74	68.6	10.2	90	87.1	2.9	111	27.0	26.2	105
SLM	41	36	119	43	7.2	5.2	100	90	15	10	72	71.3	10.6	97	84.8	3.1	104	26.7	26.0	105
LM	51	35	111	39	7.0	5.2	110	80	18	15	68	66.8	10.3	87	86.6	3.2	108	27.5	24.6	97
LM	51	35	107	37	7.2	4.9	90	70	20	17	69	67.0	9.9	86	84.3	3.3	102	28.9	25.4	98
DUMAS			STONEVILLE 213						100 PERCENT											
SLM	41	35	101	31	5.6	4.0	120	90	11	9	62	67.9	11.1	92	81.9	2.9	98	26.5	27.1	109
SLM	41	35	97	33	5.8	4.2	110	90	12	10	51	70.0	10.7	95	82.6	3.4	98	27.1	25.3	101
SLM	41	35	102	32	6.4	4.2	110	80	22	18	60	68.3	10.1	89	85.1	3.5	103	26.9	25.6	103
SLM	41	35	102	35	6.5	4.5	90	70	16	14	64	67.6	10.1	88	84.2	3.2	103	28.5	25.5	99
EUDORA			DELTAPINE 16						100 PERCENT											
SLM	41	35	106	35	6.1	4.4	120	90	11	11	68	68.8	11.0	94	84.8	2.8	106	26.3	26.9	109
SLM	41	35	107	38	6.5	4.8	100	80	12	11	67	69.2	10.5	93	85.9	2.9	108	26.2	25.4	103
SLM	41	35	106	35	6.7	4.5	100	90	13	9	67	68.1	9.8	88	84.6	2.6	106	27.0	25.8	103
SLM	41	34	103	35	6.6	4.7	90	70	12	7	62	69.9	9.9	92	83.1	2.8	102	28.8	23.4	90
HUGHES			STONEVILLE 213						100 PERCENT											
SLM	41	35	103	31	5.7	3.8	120	90	14	10	65	68.8	10.8	93	85.8	2.8	108	26.1	26.8	109
SLM	41	35	105	37	6.4	4.8	90	70	18	15	64	67.2	10.9	90	86.7	3.4	108	26.4	26.2	106
SLM	41	35	100	35	6.0	4.5	100	70	15	12	59	69.0	10.0	90	84.1	3.1	103	27.6	26.3	104
LM	51	35	91	31	6.4	4.8	70	60	22	16	52	65.3	9.7	83	84.2	3.7	101	29.6	24.6	93

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
ARKANSAS														
LEACHVILLE			BRYCOT #4				100 PERCENT							
SLM	41	35	1.12	46	4.2	91	23	6.0	1.6	2.4	1	3	101	5.9
SLM	41	35	1.12	43	4.0	86	22	6.6	1.7	2.9	1	3	101	5.6
SLM	41	35	1.06	42	3.3	82	21	6.1	2.1	3.6	3	3	95	5.9
LEACHVILLE			STONEVILLE 213				100 PERCENT							
SLM	41	36	1.15	45	4.4	85	23	7.2	2.6	3.5	1	2	101	5.7
SLM	41	35	1.11	43	4.3	82	23	7.6	1.9	3.0	1	3	102	6.4
SLM	41	35	1.10	42	3.6	79	23	7.1	1.9	3.7	2	3	96	6.1
MARIANNA			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.09	45	4.8	87	23	6.7	2.1	2.9	2	3	99	5.5
SLM	41	35	1.08	44	4.4	83	22	6.4	2.0	3.1	2	3	100	6.6
SLM	41	35	1.07	44	3.9	84	23	6.2	1.8	2.8	3	3	96	6.9
LM	51	34	1.06	44	3.8	81	21	6.5	2.5	3.8	3	2	93	7.3
OSCEOLA			STONEVILLE 7A				100 PERCENT							
SLM	41	35	1.13	42	3.7	92	24	5.6	2.5	3.5	1	3	101	6.3
SLM	41	35	1.10	43	4.0	90	22	6.0	3.0	4.4	1	3	101	7.5
LM	51	35	1.07	39	2.9	82	22	5.8	2.4	3.5	3	2	94	7.7
TYRONZA			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.11	44	4.3	82	23	6.7	1.2	1.9	1	2	100	5.8
SLM	41	35	1.08	41	3.3	80	23	6.5	2.0	3.2	2	3	96	5.6
SLM LT SP	42	35	1.10	43	3.7	80	22	6.8	2.4	3.8	3	3	93	6.6
WILSON			DELTAPINE 16				100 PERCENT							
SLM	41	36	1.17	45	4.1	86	24	7.4	1.9	2.7	2	3	100	5.9
SLM	41	36	1.16	44	3.8	81	22	8.4	2.3	3.0	2	3	100	6.6
SLM LT SP	42	35	1.13	43	3.5	80	22	7.4	2.5	3.9	2	2	96	7.2
WYNNE			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.14	45	4.4	85	24	8.9	2.9	3.6	1	2	101	5.9
SLM	41	35	1.14	44	4.2	85	25	7.8	2.5	3.5	1	3	101	6.7
LM	51	35	1.11	41	3.4	81	23	8.0	2.4	3.5	2	2	95	6.7

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
ARKANSAS																				
LEACHVILLE			BRYCOT #4						100 PERCENT											
SLM		41 35	106	33	5.8	4.2	100	70	20	17	67	70.2	10.9	96	84.9	3.0	105	25.4	27.3	112
SLM		41 35	111	37	6.3	4.4	90	70	20	13	67	69.4	10.7	94	84.5	3.4	102	27.1	26.2	105
SLM		41 35	100	31	6.7	4.4	90	70	23	20	58	65.5	10.2	85	84.7	3.7	102	28.5	25.4	99
LEACHVILLE			STONEVILLE 213						100 PERCENT											
SLM		41 36	108	35	6.7	4.5	90	80	20	16	66	68.9	11.0	94	85.8	2.8	108	25.6	27.3	112
SLM		41 35	110	37	6.9	4.9	90	70	13	11	66	70.0	11.0	96	85.4	3.6	104	25.7	26.2	107
SLM		41 35	103	35	6.7	4.8	100	90	20	16	63	69.1	10.4	92	85.5	3.8	103	27.0	25.1	100
MARIANNA			STONEVILLE 213						100 PERCENT											
SLM		41 35	97	30	5.9	4.3	110	80	15	10	56	68.8	11.3	95	86.5	3.1	108	26.7	27.9	112
SLM		41 35	99	31	6.2	4.1	110	80	13	7	55	68.9	10.9	93	87.1	3.5	108	25.8	26.6	109
SLM		41 35	96	29	6.3	4.1	100	80	13	8	51	66.3	10.3	86	82.2	3.2	98	28.1	25.7	101
LM		51 34	92	29	5.7	4.3	100	70	12	13	54	69.4	10.5	93	83.4	3.1	101	27.4	24.5	97
OSCEOLA			STONEVILLE 7A						100 PERCENT											
SLM		41 35	100	28	5.7	3.7	80	60	26	25	61	70.4	10.8	96	86.9	3.0	110	27.1	26.4	105
SLM		41 35	104	34	6.4	4.2	80	70	18	14	61	70.0	11.1	97	85.3	3.2	105	27.0	25.9	104
LM		51 35	92	29	5.8	4.2	100	70	37	26	51	66.8	9.8	86	84.6	3.1	104	28.8	24.6	95
TYRONZA			STONEVILLE 213						100 PERCENT											
SLM		41 35	107	35	6.4	4.5	100	80	17	9	60	69.3	10.5	93	83.4	3.1	101	26.5	25.9	105
SLM		41 35	107	36	6.8	4.4	90	70	22	17	58	68.0	10.3	89	83.8	3.5	100	27.3	26.1	104
SLM LT SP		42 35	105	35	6.8	4.8	90	70	28	20	60	62.9	10.6	81	83.7	3.9	99	28.5	25.5	99
WILSON			DELTAPINE 16						100 PERCENT											
SLM		41 36	115	39	6.8	4.8	110	80	15	11	79	70.2	10.9	96	86.0	2.8	108	25.0	27.0	112
SLM		41 36	122	45	7.6	5.6	110	70	19	12	82	67.4	10.3	88	84.2	3.4	102	26.0	26.0	106
SLM LT SP		42 35	113	40	7.5	5.3	110	80	18	13	70	67.7	10.3	89	85.0	3.4	104	27.1	25.3	101
WYNNE			DELTAPINE 16						100 PERCENT											
SLM		41 35	112	38	7.4	5.2	110	90	20	13	69	69.4	11.0	95	83.5	3.2	101	26.3	27.1	110
SLM		41 35	116	41	6.9	5.0	110	90	19	14	66	69.5	10.6	94	82.9	3.0	100	27.3	25.6	102
LM		51 35	113	38	7.3	5.1	110	80	21	16	71	67.0	9.7	86	85.7	3.2	106	27.5	25.3	100

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
LOUISIANA														
BUNKIE			DELTAPINE 45A				90 PERCENT							
SLM LT SP	42	34	1.05	47	4.9	79	21	6.0	1.8	2.8	5	3	84	4.8
LM	51	34	1.08	45	4.5	83	22	6.6	2.3	3.5	4	2	87	6.3
LM	51	34	1.06	45	4.6	83	20	6.9	2.0	2.9	3	3	91	6.6
LAKE PROVIDENCE			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.15	43	4.3	83	23	7.6	1.9	2.8	1	2	102	5.1
SLM	41	35	1.13	44	4.2	80	22	7.6	2.0	2.7	1	2	102	5.8
SLM	41	35	1.12	44	4.1	77	22	7.1	2.5	3.8	1	2	100	6.6
LAKE PROVIDENCE			STONEVILLE 213				100 PERCENT							
SLM	41	34	1.10	45	4.6	87	22	6.2	1.8	2.9	3	3	95	5.9
SLM	41	35	1.10	44	4.4	80	21	6.5	2.1	2.9	2	3	97	7.0
LM	51	35	1.09	42	3.6	80	22	6.2	2.6	3.9	2	2	96	7.3
MONROE			DELTAPINE 16				100 PERCENT							
LM	51	34	1.15	44	4.2	81	23	7.2	1.3	2.3	4	2	87	6.3
SLM	41	35	1.11	45	4.5	81	23	6.6	1.4	2.4	3	3	96	4.8
SLM	41	35	1.11	45	3.7	81	22	7.5	1.1	2.0	3	2	95	4.8
SHREVEPORT			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.14	43	4.7	82	23	7.1	1.6	2.1	2	3	100	5.2
SLM	41	35	1.13	44	4.3	80	23	8.0	1.6	2.4	1	2	103	6.4
SLM	41	35	1.12	44	4.5	77	23	7.2	2.0	2.7	3	3	95	5.6
WINNSBORO			STONEVILLE 213				100 PERCENT							
SLM LT SP	42	34	1.08	45	4.6	90	21	6.4	2.7	3.9	3	3	91	7.5
LM	51	35	1.09	47	4.7	84	23	6.9	3.3	4.1	2	3	98	7.5
LM	51	35	1.07	45	4.2	83	22	6.0	2.2	3.7	3	2	95	7.4
MISSISSIPPI														
ARCOLA			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.07	44	4.3	80	24	7.5	1.5	2.2	2	2	98	6.3
SLM	41	36	1.11	44	3.9	82	23	7.5	1.0	1.8	1	2	101	5.5
SLM	41	36	1.11	44	3.9	81	23	7.1	1.4	2.5	1	2	101	6.1

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
LOUISIANA																				
BUNKIE			DELTAPINE 45A						90 PERCENT											
SLM LT SP	42	34	73	22	4.7	3.2	120	90	11	9	45	60.8	10.7	78	82.4	3.2	98	27.7	26.0	103
LM	51	34	87	26	5.3	3.5	110	90	10	9	57	65.1	10.1	84	85.1	2.9	106	26.4	26.1	106
LM	51	34	94	31	5.8	3.8	110	100	11	8	62	63.1	10.1	80	84.4	3.1	103	25.7	26.9	110
LAKE PROVIDENCE			DELTAPINE 16						100 PERCENT											
SLM	41	35	109	37	7.0	4.9	110	90	11	9	76	70.3	10.5	95	83.6	2.9	102	27.0	26.9	108
SLM	41	35	107	38	7.0	4.8	110	90	16	11	65	68.2	10.0	89	84.9	2.8	106	26.8	25.9	104
SLM	41	35	111	38	7.2	5.2	120	80	18	14	73	70.9	9.8	94	85.2	2.9	106	26.5	25.4	103
LAKE PROVIDENCE			STONEVILLE 213						100 PERCENT											
SLM	41	34	92	25	5.4	3.3	110	70	23	17	55	66.6	10.6	88	85.3	3.0	106	26.6	26.3	106
SLM	41	35	102	34	6.0	4.4	110	80	21	14	58	69.2	10.2	92	83.1	3.3	100	26.8	26.0	104
LM	51	35	98	31	6.4	4.3	90	70	40	29	55	69.1	10.2	91	84.5	3.2	103	28.3	25.5	99
MONROE			DELTAPINE 16						100 PERCENT											
LM	51	34	90	29	5.6	4.0	110	80	15	13	70	61.6	9.8	78	85.5	2.9	107	25.6	26.4	108
SLM	41	35	104	36	6.2	4.6	110	80	12	10	62	68.1	10.5	90	83.5	2.8	102	27.2	24.8	99
SLM	41	35	108	37	7.3	5.2	100	80	17	14	70	66.6	10.0	86	86.1	3.1	107	26.5	25.9	105
SHREVEPORT			DELTAPINE 16						100 PERCENT											
SLM	41	35	98	32	6.1	4.2	130	90	9	7	65	68.2	10.7	91	78.7	3.2	90	26.9	26.6	107
SLM	41	35	105	34	6.5	4.2	110	90	14	9	58	68.6	10.4	91	85.4	3.1	106	27.1	25.8	103
SLM	41	35	106	38	6.4	5.0	110	90	20	14	64	65.9	10.3	86	85.3	3.2	105	26.6	26.5	107
WINNSBORO			STONEVILLE 213						100 PERCENT											
SLM LT SP	42	34	87	23	5.2	3.0	130	100	14	8	55	64.5	11.1	85	85.5	3.2	106	26.7	26.9	108
LM	51	35	107	37	6.4	4.5	100	90	23	16	60	67.8	10.8	91	84.4	3.1	103	26.6	25.9	104
LM	51	35	93	32	5.6	4.3	100	80	20	15	51	66.3	10.3	86	84.5	3.3	103	27.2	25.3	101
MISSISSIPPI																				
ARCOLA			DELTAPINE 16						100 PERCENT											
SLM	41	35	109	37	6.2	4.5	100	80	11	6	63	68.5	9.6	88	84.8	3.3	104	26.1	25.8	105
SLM	41	36	110	40	6.8	5.1	110	80	17	14	69	69.0	10.0	90	83.5	2.6	103	27.4	24.9	99
SLM	41	36	114	39	7.1	5.2	100	80	15	10	69	69.0	9.4	89	83.4	3.4	100	29.3	25.2	96

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL MISSISSIPPI														
CLARKSDALE			STONEVILLE 213				100 PERCENT							
SLM LT SP	42	35	1.07	44	4.3	82	22	7.3	2.5	3.2	3	4	95	7.4
SLM LT SP	42	35	1.08	44	4.2	83	22	5.9	1.7	2.7	2	3	96	6.7
SLM LT SP	42	35	1.07	44	3.7	83	21	6.0	2.6	3.9	3	2	95	7.1
GLENDORA			STONEVILLE 213				100 PERCENT							
LM	51	35	1.13	44	4.1	86	23	6.3	2.6	3.4	2	2	98	6.6
LM	51	35	1.10	43	3.5	87	22	5.7	2.6	3.9	2	2	98	6.7
LM	51	35	1.06	44	3.4	83	22	5.9	2.0	3.7	3	2	94	6.9
GUNNISON			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.09	43	3.9	83	24	7.4	1.5	2.2	2	3	99	4.2
SLM	41	35	1.11	43	3.9	82	24	8.3	1.5	2.2	1	3	102	6.2
SLM	41	35	1.11	42	3.7	80	23	7.8	1.5	2.7	1	2	101	5.8
INDIANOLA			DELTAPINE 16				100 PERCENT							
SLM	41	34	1.08	42	3.9	86	24	6.3	2.4	3.4	2	2	97	5.7
SLM	41	34	1.09	43	4.2	84	23	7.8	2.0	2.9	2	2	100	6.9
SLM	41	35	1.08	44	4.4	82	23	7.3	1.9	3.0	2	2	97	6.9
INDIANOLA			DIXIE KING III				100 PERCENT							
LM	51	35	1.02	45	4.4	93	24	5.4	2.5	3.7	3	3	91	7.2
LM LT SP	52	35	1.04	44	4.6	87	23	5.0	3.9	5.2	4	3	86	8.0
LM	51	34	1.03	43	4.8	87	23	5.3	2.4	3.1	4	2	89	9.4
INDIANOLA			STONEVILLE 213				100 PERCENT							
SLM	41	34	1.06	47	4.7	92	23	6.2	2.1	3.1	2	3	99	6.2
LM	51	35	1.07	46	4.3	84	23	6.4	3.6	4.6	2	3	96	6.9
LM	51	34	1.06	45	4.0	81	22	6.1	3.0	4.3	3	2	94	6.7
LAKE CORMORANT			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.16	43	4.4	81	22	7.4	2.2	2.8	1	2	100	5.9
SLM	41	36	1.16	43	3.9	79	23	7.6	1.6	2.7	2	2	100	5.6
SLM LT SP	42	36	1.12	42	3.4	81	23	7.2	1.8	3.1	2	3	98	6.4

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
MISSISSIPPI																				
CLARKSDALE			STONEVILLE 213						100 PERCENT											
SLM LT SP	42	35	101	33	6.3	4.2	100	70	26	10	56	66.8	11.5	91	84.0	3.2	102	26.7	25.7	103
SLM LT SP	42	35	101	31	6.4	4.0	90	70	24	19	57	66.4	10.6	87	84.2	2.9	104	25.6	26.2	108
SLM LT SP	42	35	100	33	6.5	4.3	100	90	18	17	58	68.0	10.3	89	84.0	3.6	100	29.0	25.2	97
GLENDORA			STONEVILLE 213						100 PERCENT											
LM	51	35	108	34	6.5	4.4	100	80	18	13	66	69.7	11.2	96	84.3	3.1	103	26.7	26.5	107
LM	51	35	107	37	6.5	4.4	90	70	20	18	62	70.0	10.0	93	83.6	3.2	101	26.4	26.3	106
LM	51	35	101	34	6.1	4.7	100	80	29	24	59	66.4	9.3	84	86.9	3.2	109	27.8	25.6	101
GUNNISON			DELTAPINE 16						100 PERCENT											
SLM	41	35	103	33	6.2	4.4	100	70	22	14	64	69.6	10.4	93	82.8	3.0	100	27.1	25.9	103
SLM	41	35	108	37	7.0	5.0	100	70	16	13	67	69.9	10.7	95	84.4	3.4	102	27.0	25.9	104
SLM	41	35	106	36	7.3	5.2	80	70	17	21	62	67.2	9.5	86	84.1	2.8	104	29.3	25.6	98
INDIANOLA			DELTAPINE 16						100 PERCENT											
SLM	41	34	110	36	6.2	4.3	110	90	16	9	66	68.7	10.4	91	82.3	3.0	99	26.7	26.4	106
SLM	41	34	114	40	7.1	4.8	100	90	12	8	68	69.7	9.9	92	87.2	2.9	111	27.0	25.4	102
SLM	41	35	102	32	6.7	4.3	100	80	14	11	57	69.5	9.4	90	84.1	2.5	105	28.7	23.9	92
INDIANOLA			DIXIE KING III						100 PERCENT											
LM	51	35	105	31	5.4	3.5	110	80	21	12	61	65.6	11.0	87	85.6	3.0	107	26.6	25.9	104
LM LT SP	52	35	101	34	5.4	3.8	100	90	17	15	55	62.9	10.6	81	82.6	3.4	98	29.0	25.3	97
LM	51	34	90	30	5.5	4.0	100	80	23	16	47	68.4	9.7	89	85.6	3.1	106	28.8	24.2	93
INDIANOLA			STONEVILLE 213						100 PERCENT											
SLM	41	34	101	28	5.7	3.7	120	90	12	10	54	70.3	10.9	96	85.3	2.9	106	26.0	26.9	110
LM	51	35	110	38	6.3	4.6	100	90	13	9	61	68.6	10.5	91	83.0	2.9	101	27.0	25.5	102
LM	51	34	106	35	6.1	4.2	110	80	17	14	63	68.6	10.0	90	83.4	3.0	101	27.1	24.7	99
LAKE CORMORANT			DELTAPINE 16						100 PERCENT											
SLM	41	35	111	39	6.8	4.9	100	70	13	12	67	70.1	10.2	94	84.4	3.0	104	26.8	26.4	106
SLM	41	36	110	41	6.8	5.3	90	80	15	13	71	69.2	9.9	91	84.5	2.9	104	27.1	26.3	105
SLM LT SP	42	36	116	40	7.5	5.3	100	90	17	14	72	68.3	10.7	91	84.1	3.0	103	28.0	25.3	99

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL MISSISSIPPI														
LELAND			STONEVILLE 213				100 PERCENT							
SGO	61	35	1.12	44	4.4	83	23	6.6	6.2	7.6	3	2	92	8.6
1/ LM LT SP	52	35	1.11	46	4.1	83	23	6.4	6.7	8.2	3	3	90	10.4
LM	51	35	1.09	46	4.0	82	21	6.1	5.3	7.3	3	2	90	9.2
LYON			STONEVILLE 213				100 PERCENT							
LM	51	34	1.12	45	4.6	85	24	6.5	2.5	3.1	2	3	98	6.5
SLM	41	35	1.09	44	4.1	85	23	6.3	2.2	3.2	2	3	100	6.4
LM	51	35	1.07	45	3.7	79	23	6.4	2.8	3.9	2	2	98	5.8
NATCHEZ			STONEVILLE 213				100 PERCENT							
LM	51	34	1.09	44	4.3	85	22	6.4	2.7	3.7	2	3	96	7.6
LM	51	34	1.06	44	4.4	83	22	6.7	2.9	3.7	3	3	95	7.5
LM	51	35	1.10	46	4.6	83	22	5.9	3.8	3.2	3	3	92	8.0
NITTA YUMA			DELTAPINE 25				100 PERCENT							
SLM	41	35	1.10	45	4.6	89	24	6.1	1.9	2.9	2	2	97	6.4
SLM	41	35	1.11	44	4.3	86	23	6.9	2.3	3.2	1	2	101	6.9
SLM	41	35	1.09	43	4.2	87	23	6.2	1.8	2.9	2	2	99	6.1
OLIVE BRANCH			STONEVILLE 213				93 PERCENT							
SLM	41	35	1.09	46	3.9	80	22	7.3	1.7	3.1	1	3	103	6.4
SLM	41	35	1.07	44	4.1	81	22	6.9	1.5	2.4	1	3	101	5.9
SLM	41	35	1.09	43	3.4	80	22	6.4	2.1	3.3	1	2	101	5.9
SCOTT			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.14	43	4.2	85	24	7.6	1.6	2.6	2	2	99	5.9
SLM	41	35	1.12	41	3.7	81	23	7.3	1.9	2.8	2	2	99	5.8
LM	51	35	1.12	41	3.5	77	22	7.0	2.1	3.2	3	1	95	6.2
TRIBBETT			STONEVILLE 7A				100 PERCENT							
LM	51	35	1.08	45	4.5	96	23	5.2	2.3	3.2	2	3	96	6.8
LM+	50	35	1.09	46	4.6	92	22	5.4	2.3	3.5	2	3	99	7.2
LM	51	35	1.07	44	3.6	84	22	5.2	2.7	4.6	3	1	93	7.2

1/ Reduced from 42 because of grass

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade		Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
MISSISSIPPI																				
LELAND				STONEVILLE 213					100 PERCENT											
SGO		61 35	105	35	6.4	4.5	110	80	16	12	68	66.3	10.4	86	86.4	2.7	110	25.8	26.0	106
1/ LM LT SP		52 35	107	38	6.5	4.8	100	70	23	18	58	65.0	11.4	87	85.3	3.5	104	25.8	25.8	106
LM		51 35	108	37	6.8	4.5	100	70	29	21	64	67.7	9.7	87	83.9	3.0	103	27.4	26.0	103
LYON				STONEVILLE 213					100 PERCENT											
LM		51 34	102	32	5.9	4.2	120	90	13	9	62	68.0	11.4	93	82.3	3.1	98	26.4	26.7	108
SLM		41 35	105	35	6.6	4.4	110	80	14	11	55	69.0	10.5	92	83.3	4.1	97	26.5	26.3	106
LM		51 35	103	33	6.6	4.5	110	90	25	16	60	67.7	9.6	87	84.7	3.2	104	27.8	24.8	98
NATCHEZ				STONEVILLE 213					100 PERCENT											
LM		51 34	85	28	5.3	4.0	110	80	14	10	52	64.9	10.5	84	83.7	3.1	102	25.9	26.7	109
LM		51 34	94	29	5.9	4.0	90	70	18	15	55	69.2	10.9	94	85.2	3.2	105	27.0	26.5	106
LM		51 35	101	32	6.0	3.8	90	80	21	14	54	65.5	10.6	86	83.6	3.3	101	25.9	27.0	110
NITTA YUMA				DELTAPINE 25					100 PERCENT											
SLM		41 35	103	30	5.8	3.8	110	80	14	10	60	68.6	10.4	91	86.6	3.1	109	27.9	26.4	104
SLM		41 35	112	40	6.5	4.7	110	80	18	12	63	70.8	10.2	95	84.4	3.0	104	26.4	26.4	107
SLM		41 35	103	34	6.2	4.6	100	80	22	20	57	68.5	9.6	88	84.2	3.1	103	28.4	25.8	100
OLIVE BRANCH				STONEVILLE 213					93 PERCENT											
SLM		41 35	109	40	6.7	5.2	90	80	18	13	67	68.8	10.6	92	84.2	3.0	103	25.6	26.2	108
SLM		41 35	106	37	6.7	4.9	100	90	16	9	65	69.6	10.4	93	84.0	3.3	102	27.4	26.1	104
SLM		41 35	111	38	7.3	5.2	100	90	20	18	65	69.4	10.4	93	83.5	3.2	101	28.5	25.7	100
SCOTT				DELTAPINE 16					100 PERCENT											
SLM		41 35	110	37	6.4	4.6	90	80	18	12	71	68.8	9.9	90	85.3	2.8	107	26.1	26.1	106
SLM		41 35	113	40	6.8	5.1	90	70	18	17	67	69.2	9.8	90	84.9	3.2	104	26.2	27.0	110
LM		51 35	108	38	7.2	5.1	90	70	31	23	71	67.9	9.5	87	83.9	2.8	103	28.4	24.5	95
TRIBBETT				STONEVILLE 7A					100 PERCENT											
LM		51 35	99	31	5.3	3.7	120	90	12	8	61	69.0	10.7	93	83.4	3.2	101	27.8	25.7	101
LM+		50 35	100	33	5.2	3.8	110	90	19	14	56	69.3	10.5	93	83.3	2.8	102	27.8	26.1	103
LM		51 35	102	33	5.6	3.9	100	80	16	13	61	65.8	9.2	83	82.6	3.3	98	29.8	24.1	91

1/ Reduced from 42 because of grass

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
MISSISSIPPI														
WATER VALLEY			DELTAPINE 16				95 PERCENT							
SLM	41	35	1.12	42	3.6	83	23	7.8	2.5	3.5	1	2	101	5.6
SLM	41	35	1.10	43	3.6	77	22	8.7	1.8	2.7	1	3	103	6.1 1/
SLM	41	35	1.06	42	3.3	79	22	7.4	1.4	2.5	1	2	102	6.1
WINONA			DELTAPINE 16				95 PERCENT							
SLM	41	35	1.13	45	4.2	85	22	7.7	1.3	2.1	1	2	100	5.6
SLM	41	35	1.11	44	3.9	81	23	8.1	1.9	2.6	2	3	99	5.7
SLM	41	35	1.12	43	3.8	80	22	7.6	2.0	3.1	2	2	99	6.1
MISSOURI														
BELL CITY			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.11	43	3.9	81	23	8.0	1.2	1.8	1	4	101	5.1
SLM	41	35	1.11	44	4.1	84	23	7.0	2.3	3.0	1	3	101	6.5
SLM LT SP	42	35	1.11	42	3.7	81	23	6.9	1.7	3.3	3	3	93	5.8
PORTAGEVILLE			STONEVILLE 213				94 PERCENT							
SLM	41	35	1.14	45	4.4	82	24	7.0	1.6	2.3	2	3	99	5.9
SLM	41	36	1.11	44	4.2	82	22	7.1	1.8	2.5	1	2	101	5.7
SLM	41	35	1.09	43	3.8	80	21	6.9	1.5	2.0	2	3	96	6.1
SENATH			AUBURN M				100 PERCENT							
SLM	41	35	1.10	44	3.6	81	23	6.7	1.9	2.6	1	2	101	5.3
SLM	41	35	1.09	43	3.7	80	22	7.1	2.0	2.9	2	3	100	6.1
SLM LT SP	42	35	1.06	43	3.0	73	21	7.0	1.9	2.8	4	3	90	6.7
SENATH			DELTAPINE 16				80 PERCENT							
SLM	41	35	1.13	44	4.0	82	22	7.9	1.3	1.8	1	3	103	5.5
SLM	41	35	1.13	43	3.7	82	23	7.6	1.7	2.6	2	3	99	5.6
SLM	41	35	1.10	42	3.2	79	21	7.4	1.2	2.1	2	3	99	5.1
TENNESSEE														
BRADEN			DELTAPINE 16				95 PERCENT							
SLM	41	35	1.10	45	4.3	79	23	8.0	1.6	2.2	1	3	102	6.1
SLM	41	35	1.07	43	4.0	81	22	6.9	1.7	2.4	1	2	101	5.8
SLM	41	35	1.10	44	3.7	82	24	7.2	2.0	2.6	2	2	99	6.1

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
MISSISSIPPI																				
WATER VALLEY			DELTAPINE 16						95 PERCENT											
SLM	41	35	109	36	7.0	5.2	100	80	11	9	70	71.2	10.7	97	86.1	2.8	109	28.1	26.9	105
SLM	41	35	107	37	7.4	5.1	90	70	17	14	68	68.8	10.4	92	84.3	3.4	102	28.0	25.3	99
SLM	41	35	107	35	7.5	4.9	110	80	17	16	62	68.1	9.6	88	85.9	3.1	107	28.2	25.4	99
WINONA			OELTAPINE 16						95 PERCENT											
SLM	41	35	110	35	6.6	4.8	110	90	11	8	69	69.4	11.1	95	86.1	2.7	109	27.2	27.7	110
SLM	41	35	113	39	7.2	5.2	110	90	14	11	69	69.1	10.6	93	83.9	2.8	103	25.5	27.0	111
SLM	41	35	110	38	7.0	4.8	100	90	15	12	64	69.2	10.1	91	82.4	2.9	99	27.6	25.7	102
MISSOURI																				
BELL CITY			STONEVILLE 213						100 PERCENT											
SLM	41	35	105	36	7.0	4.8	100	70	16	14	67	67.9	11.2	92	84.2	3.2	103	27.7	25.8	102
SLM	41	35	104	35	6.8	4.6	100	80	13	10	58	70.3	10.7	96	83.9	3.5	101	27.6	26.3	104
SLM LT SP	42	35	103	35	6.9	4.7	110	80	19	15	62	64.0	10.5	83	84.3	3.6	101	26.8	25.8	104
PORTAGEVILLE			STONEVILLE 213						94 PERCENT											
SLM	41	35	106	35	6.7	4.5	120	80	15	11	67	68.5	11.4	94	83.6	2.9	102	27.1	26.3	105
SLM	41	36	110	39	6.8	5.0	90	70	12	14	67	69.8	10.3	93	81.9	3.1	98	26.5	26.4	107
SLM	41	35	99	33	6.6	4.9	100	70	16	12	57	65.8	10.2	85	84.6	3.2	103	27.3	25.0	99
SENATH			AUBURN M						100 PERCENT											
SLM	41	35	107	35	7.0	4.7	100	80	21	17	69	70.4	11.2	97	83.7	3.1	102	26.4	26.2	106
SLM	41	35	111	39	7.0	5.2	90	80	16	11	72	70.3	11.1	97	85.1	3.0	105	26.8	26.2	105
SLM LT SP	42	35	95	31	6.7	4.7	100	80	23	18	56	64.8	10.2	84	84.8	4.0	101	27.2	25.4	101
SENATH			DELTAPINE 16						80 PERCENT											
SLM	41	35	111	36	7.2	5.0	80	60	24	17	75	69.0	10.9	94	83.8	3.1	102	26.3	26.5	107
SLM	41	35	109	38	6.9	4.8	100	70	15	10	68	67.0	10.3	88	84.1	3.1	103	27.3	25.8	103
SLM	41	35	106	36	7.6	5.1	100	70	27	22	62	66.6	10.0	86	85.8	3.4	105	27.1	25.3	101
TENNESSEE																				
BRADEN			DELTAPINE 16						95 PERCENT											
SLM	41	35	109	34	7.0	4.8	110	80	14	9	65	68.8	10.7	93	85.4	3.1	106	25.8	26.3	108
SLM	41	35	109	36	7.2	4.9	100	80	12	12	66	69.2	10.0	91	84.6	3.3	103	26.6	26.0	105
SLM	41	35	112	37	7.6	5.1	110	90	14	13	69	70.1	10.0	93	85.3	3.6	104	26.3	25.2	102

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
TENNESSEE														
MILLINGTON			REX SMOOTHLEAF				95 PERCENT							
SLM	41	35	1.12	44	3.2	82	22	6.9	2.5	3.4	1	3	102	5.9
SLM	41	35	1.12	47	3.6	83	21	7.4	2.4	3.5	1	3	101	6.5
LM	51	35	1.07	44	3.5	82	21	6.4	1.9	3.2	2	3	97	6.4
RIDGELY			STONEVILLE 213				75 PERCENT							
SLM	41	35	1.12	46	4.7	86	23	6.3	1.9	2.5	2	3	99	5.5
SLM	41	35	1.11	44	4.2	83	23	7.4	1.9	2.6	1	3	101	6.2
SLM	41	35	1.11	43	3.8	80	23	6.3	1.6	2.4	2	3	98	5.6
SOUTH WEST														
SOUTH TEXAS														
BROWNSVILLE			TAMCOT SP37				90 PERCENT							
SLM	41	34	1.06	45	4.2	79	22	6.8	1.8	2.5	1	3	102	4.5
SLM	41	34	1.08	47	4.5	80	22	7.1	1.8	2.6	1	3	103	5.4
SLM	41	34	1.06	43	3.5	78	22	6.8	2.3	3.1	0	2	104	5.5
EL CAMPO			STONEVILLE 7A				85 PERCENT							
SLM	41	34	1.07	44	4.6	90	23	4.7	1.8	2.5	3	3	93	5.1
SLM	41	34	1.10	45	4.5	93	23	5.2	2.1	2.7	3	3	96	5.8
SLM LT SP	42	34	1.07	45	4.6	92	20	4.8	2.0	2.7	4	4	90	6.5
GANADO			DELTAPINE 16				75 PERCENT							
SLM	41	34	1.10	45	4.3	82	24	6.9	1.8	2.5	2	3	97	5.5
SLM	41	34	1.08	44	4.4	82	22	6.8	1.5	2.3	2	3	100	6.8
SLM LT SP	42	33	1.06	44	4.3	83	21	6.7	3.8	4.4	3	4	94	6.3
RIO HONDO			STONEVILLE 7A				85 PERCENT							
SLM	41	34	1.07	46	4.2	83	24	6.3	1.7	2.3	1	2	102	5.3
SLM	41	34	1.10	46	4.6	86	24	6.4	1.6	2.1	1	3	104	5.7
SLM	41	34	1.05	46	4.2	88	23	5.6	1.6	2.3	2	3	100	5.8
ROBSTOWN			TAMCOT SP37				95 PERCENT							
M	31	33	1.06	43	4.1	78	22	6.9	1.6	2.3	0	3	105	5.5
M	31	33	1.05	43	3.9	80	22	6.9	1.2	1.9	0	3	106	6.1
SLM	41	34	1.09	43	3.7	80	22	6.5	2.8	3.4	2	3	97	6.0

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
TENNESSEE																				
MILLINGTON			REX SMOOTHLEAF						95 PERCENT											
SLM		41 35	116	41	7.0	5.0	100	70	21	17	74	68.6	11.1	94	84.4	3.8	101	26.5	26.0	105
SLM		41 35	114	40	7.3	4.9	100	80	13	14	75	69.2	11.1	95	85.6	3.8	103	26.6	25.5	103
LM		51 35	104	36	6.9	4.7	110	90	19	15	65	67.4	10.5	89	85.6	3.5	105	26.6	25.3	102
RIDGELY			STONEVILLE 213						75 PERCENT											
SLM		41 35	106	34	6.5	4.5	100	70	25	20	64	68.0	11.3	93	85.1	3.1	105	25.2	27.0	112
SLM		41 35	108	38	6.6	4.9	100	70	21	12	65	68.4	11.1	93	84.2	3.4	102	27.0	25.4	102
SLM		41 35	106	37	6.8	4.4	100	80	27	19	62	67.8	10.4	89	84.3	3.3	102	26.8	26.4	106
SOUTH WEST																				
SOUTH TEXAS																				
BROWNSVILLE			TAMCOT SP37						90 PERCENT											
SLM		41 34	102	36	6.4	4.8	80	70	21	19	68	69.7	11.1	96	81.5	3.1	97	26.5	26.8	108
SLM		41 34	108	38	6.2	4.5	90	80	15	11	64	70.3	10.8	96	84.5	3.0	104	26.8	26.4	106
SLM		41 34	104	35	6.4	4.7	80	70	27	24	60	69.8	10.5	94	85.0	3.1	105	27.6	26.3	104
EL CAMPO			STONEVILLE 7A						85 PERCENT											
SLM		41 34	98	32	5.2	3.6	110	80	14	10	58	66.0	10.7	87	82.6	3.2	99	27.1	26.6	106
SLM		41 34	93	31	5.3	3.6	100	90	16	13	57	66.6	10.9	88	83.3	3.1	101	27.7	26.4	104
SLM LT SP		42 34	97	29	5.4	3.6	80	70	20	19	54	64.3	11.5	86	82.5	3.6	97	28.0	26.3	103
GANADO			DELTAPINE 16						75 PERCENT											
SLM		41 34	102	36	6.7	4.9	90	70	22	16	59	68.8	10.6	92	83.0	2.9	101	26.4	26.4	107
SLM		41 34	97	34	6.0	4.5	80	60	17	18	56	68.5	10.9	93	82.9	2.9	101	27.4	26.6	106
SLM LT SP		42 33	98	31	6.1	4.0	90	70	18	18	59	66.1	11.4	89	80.9	4.8	88	28.1	25.8	101
RIO HONDO			STONEVILLE 7A						85 PERCENT											
SLM		41 34	114	43	6.3	5.1	110	90	17	11	72	69.3	10.8	94	85.9	3.0	107	26.5	26.5	107
SLM		41 34	113	43	6.0	4.6	100	80	17	13	67	69.9	11.2	97	83.7	3.1	102	27.4	26.3	104
SLM		41 34	99	34	5.8	4.1	90	80	17	14	58	67.5	10.9	90	82.4	3.0	99	27.8	25.6	101
ROBSTOWN			TAMCOT SP37						95 PERCENT											
M		31 33	103	35	6.2	4.4	100	70	17	12	61	71.6	10.6	98	85.0	3.0	105	26.4	26.6	108
M		31 33	100	35	6.5	4.8	80	70	19	17	56	73.3	10.9	101	84.9	2.8	106	27.1	26.3	105
SLM		41 34	102	38	6.6	4.8	80	60	27	18	63	67.1	10.9	89	84.4	3.1	103	28.1	25.6	100

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
SOUTH TEXAS														
SAN JUAN			TPSA 1633				70 PERCENT							
M	31	34	1.10	47	4.9	89	23	5.8	1.0	1.4	1	3	104	5.1
M LT SP	32	34	1.09	44	4.8	86	24	5.6	2.1	2.7	1	4	102	5.6
SLM	41	34	1.07	45	4.3	87	24	5.9	1.5	2.1	1	3	102	5.8
SEBASTIAN			STONEVILLE 213				96 PERCENT							
M	31	33	1.06	48	5.3	88	25	6.3	1.9	2.1	1	4	102	4.7
SLM	41	34	1.11	46	4.9	83	24	7.0	1.9	2.5	1	3	101	5.4
SLM LT SP	42	34	1.10	46	4.2	85	24	5.9	3.8	4.4	3	4	96	6.5
CENTRAL TEXAS														
BATESVILLE			STONEVILLE 213				95 PERCENT							
M	31	35	1.13	46	4.6	85	25	6.0	1.3	1.8	1	4	104	5.1
SLM TG	44	35	1.10	43	4.5	82	21	6.0	3.3	4.1	7	7	75	6.4
LM LT SP	52	34	1.06	43	4.5	83	21	6.1	2.8	3.9	4	4	86	6.0
NAVASOTA			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.12	44	4.6	84	22	7.2	2.1	3.0	3	2	94	4.9
SLM LT SP	42	35	1.10	44	4.8	83	22	7.4	1.7	2.7	3	2	92	5.9
SLM LT SP	42	35	1.11	42	4.2	81	22	7.6	1.6	2.7	3	2	92	6.0
WHITNEY			TAMCOT SP37				100 PERCENT							
SLM	41	31	0.96	42	3.0	87	20	5.4	2.5	3.6	1	4	103	8.2
LM LT SP	52	31	0.94	41	3.4	86	19	5.7	3.5	5.0	4	3	87	8.0
LM LT SP	52	30	0.93	41	3.4	90	19	5.2	2.9	4.5	6	3	80	10.0
NORTHWEST TEXAS														
LUBBOCK			COKER 312				100 PERCENT*							
LM	51	35	1.14	42	3.9	86	23	5.9	3.3	4.9	3	3	94	7.3
1/ LM	51	35	1.13	42	3.5	84	24	6.2	2.2	3.9	2	3	99	7.5
1/ LM	51	35	1.13	41	3.2	85	24	6.3	4.4	6.0	2	3	99	8.2 2/
LUBBOCK			COKER 5110				100 PERCENT*							
1/ LM	51	35	1.11	42	3.6	82	22	6.2	2.1	3.6	3	3	94	7.2
LM	51	35	1.12	41	3.2	83	22	6.8	3.1	4.5	2	3	100	7.5
SLM	41	34	1.10	41	3.2	83	22	6.5	2.2	3.4	2	3	99	6.8

1/ Reduced from 41 because of bark
2/ Cotton stuck to processing rolls
* 100 percent selected for tests, less than 100 percent in the area

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Grade	Staple																		
Name Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST																			
SOUTH TEXAS																			
SAN JUAN			TPSA 1633					70 PERCENT											
M	31 34	115	41	5.8	4.3	120	100	10	5	67	69.5	11.2	96	82.1	3.0	98	27.5	25.8	102
M LT SP	32 34	114	41	5.6	4.2	110	100	15	11	66	67.9	11.9	95	83.0	3.2	100	27.4	26.3	104
SLM	41 34	102	37	5.9	4.1	110	90	10	8	63	68.2	11.4	94	83.1	3.4	99	27.5	25.8	102
SEBASTIAN			STONEVILLE 213					96 PERCENT											
M	31 33	116	44	6.3	5.0	110	90	10	7	70	69.3	11.3	96	80.6	3.0	95	26.7	26.5	107
SLM	41 34	118	44	6.2	4.8	110	100	12	10	70	68.5	11.3	94	82.5	3.1	99	26.7	26.2	105
SLM LT SP	42 34	112	42	6.2	4.6	90	80	16	15	67	66.8	12.2	94	81.7	3.2	97	27.7	26.3	104
CENTRAL TEXAS																			
BATESVILLE			STONEVILLE 213					95 PERCENT											
M	31 35	109	41	6.5	4.8	90	70	20	15	62	69.1	12.2	98	82.4	3.6	97	26.6	26.4	106
SLM TG	44 35	97	32	5.6	3.8	70	60	42	29	56	55.1	13.4	74	82.4	3.2	98	28.3	25.1	98
LM LT SP	52 34	89	25	5.5	3.5	70	60	27	22	54	62.1	11.1	81	81.4	4.0	93	29.0	25.0	96
NAVASOTA			DELTAPINE 16					100 PERCENT											
SLM	41 35	91	28	5.6	4.0	90	70	16	15	57	67.2	9.8	87	80.7	3.7	92	27.8	26.8	106
SLM LT SP	42 35	92	30	6.0	4.1	110	80	9	7	57	66.2	9.5	84	84.0	4.1	98	27.7	25.1	99
SLM LT SP	42 35	89	27	5.8	4.0	90	80	14	13	55	67.1	10.0	87	83.5	3.0	102	29.0	25.4	98
WHITNEY			TAMCOT SP37					100 PERCENT											
SLM	41 31	84	25	5.1	4.6	70	60	26	28	43	67.8	13.3	100	80.6	3.5	93	27.8	25.6	101
LM LT SP	52 31	65	18	4.2	3.8	70	60	34	29	36	64.7	11.6	87	82.5	3.8	96	29.3	24.8	95
LM LT SP	52 30	59	15 1/	4.3	3.6	80	70	25	22	29	59.1	10.3	75	83.3	4.0	97	30.7	24.7	91
NORTHWEST TEXAS																			
LUBBOCK			COKER 312					100 PERCENT*											
LM	51 35	105	35	6.0	4.1	80	60	40	34	50	66.4	10.2	86	83.4	3.9	98	28.9	24.7	95
2/ LM	51 35	108	38	6.1	4.6	70	60	32	25	52	68.3	10.5	91	83.7	3.3	101	27.8	24.7	97
2/ LM	51 35	107	37	6.5	5.1	60	60	35	39	51	68.8	11.5	96	84.2	3.8	100	29.2	24.7	94
LUBBOCK			COKER 5110					100 PERCENT*											
2/ LM	51 35	104	34	6.3	4.5	100	70	22	19	58	67.5	10.3	88	84.8	3.6	102	28.3	24.9	97
LM	51 35	108	38	7.4	4.9	70	60	46	31	61	68.9	11.2	95	84.9	3.7	102	29.4	24.8	94
SLM	41 34	99	34	6.3	4.8	70	60	30	28	57	68.5	10.8	92	84.6	3.7	101	29.9	24.4	92

1/ End breakage too high to spin 50s yarn. 36s yarn spun and strength adjusted to equivalent of 50s.
2/ Reduced from 41 because of bark
* 100 percent selected for tests, less than 100 percent in the area

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH WEST														
NORTHWEST TEXAS														
OLTON			DUNN 119				85 PERCENT							
1/ LM	51	34	1.05	43	2.9	84	25	6.8	2.4	3.4	2	3	99	8.0
1/ LM	51	34	1.07	42	2.8	85	23	6.8	3.3	5.0	2	3	99	7.3
SLM LT SP	42	33	1.04	42	2.5	86	25	6.8	3.0	4.8	2	3	100	8.3
ROPESVILLE			LOCKETT 4789A				100 PERCENT							
SLM	41	33	1.04	42	2.8	81	22	7.0	1.6	3.1	1	3	102	5.5
SLM	41	33	1.06	40	2.7	82	22	6.6	1.9	3.6	1	3	102	6.2
SLM	41	33	1.05	43	2.9	82	22	7.0	2.2	3.0	1	3	101	6.7
VERNON			LOCKETT 4789A				100 PERCENT							
SLM LT SP	42	31	1.00	42	4.5	87	22	6.6	2.1	2.7	2	3	98	7.2
SLM LT SP	42	32	1.03	45	4.7	85	22	6.1	2.1	3.4	2	3	96	7.7
SLM LT SP	42	32	1.01	45	4.4	81	23	6.6	3.2	4.6	3	3	96	7.4
VERNON			LOCKETT BXL				100 PERCENT							
SLM LT SP	42	32	1.05	42	4.3	89	24	6.2	1.7	3.0	3	3	95	7.3
SLM LT SP	42	32	1.07	45	4.2	89	25	5.8	3.2	4.5	3	4	91	7.9
LM LT SP	52	32	1.06	44	4.2	89	25	6.1	4.5	5.9	4	3	88	8.5
WEST														
ARIZONA														
BOWIE			STONEVILLE 213				94 PERCENT							
SLM	41	35	1.10	45	4.6	80	22	7.7	2.1	3.0	2	3	100	6.7
SLM	41	35	1.07	44	4.6	79	22	7.3	2.3	3.1	2	2	98	6.6
SLM	41	35	1.08	44	4.6	77	20	7.2	1.5	2.2	1	3	101	5.9
SLM	41	35	1.10	43	3.9	80	22	7.0	1.7	4.6	1	2	101	6.5
BUCKEYE			DELTAPINE 61				95 PERCENT							
M LT SP	32	35	1.11	48	5.4	91	24	7.0	1.5	2.2	2	3	99	5.4
SLM	41	35	1.12	46	5.3	86	25	6.4	2.7	3.6	2	2	98	7.2
SLM	41	35	1.14	47	5.0	82	24	5.7	3.1	4.1	2	2	98	7.0

1/ Reduced from 41 because of bark

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH WEST																				
NORTHWEST TEXAS																				
OLTON				DUNN 119						85 PERCENT										
1/ LM		51 34	120	43	7.1	5.4	80	60	35	27	71	68.3	11.1	93	84.5	3.7	101	28.0	24.1	94
1/ LM		51 34	112	37	7.2	4.9	70	60	37	37	67	66.8	11.3	90	85.1	4.0	101	29.0	24.9	96
SLM LT SP		42 33	113	41	7.2	5.3	70	60	37	31	64	68.8	11.7	96	85.3	4.2	101	29.7	23.2	87
ROPESVILLE				LOCKETT 4789A						100 PERCENT										
SLM		41 33	109	36	7.4	5.0	80	60	30	22	64	62.8	11.2	82	85.7	3.7	104	27.3	24.3	97
SLM		41 33	105	35	7.0	5.2	70	60	31	30	59	69.5	10.5	93	85.1	3.3	104	29.2	24.8	95
SLM		41 33	99	31	6.7	4.7	80	60	34	28	54	69.8	10.4	94	85.2	3.6	103	30.1	24.4	91
VERNON				LOCKETT 4789A						100 PERCENT										
SLM LT SP		42 31	80	23 2/	5.4	4.0	90	80	31	25	36	63.4	10.9	83	83.6	3.3	101	27.5	25.3	100
SLM LT SP		42 32	85	24	5.6	4.7	80	80	37	30	37	66.9	11.2	90	83.0	3.2	100	27.1	25.9	103
SLM LT SP		42 32	89	27	5.7	4.3	80	70	38	30	43	66.5	10.9	88	83.8	3.6	100	27.0	25.8	103
VERNON				LOCKETT BXL						100 PERCENT										
SLM LT SP		42 32	98	32	5.9	4.2	100	90	20	17	52	70.7	10.5	96	84.5	3.3	103	27.4	25.0	99
SLM LT SP		42 32	101	33	6.2	4.3	80	70	32	23	50	66.2	11.1	88	83.9	3.1	102	28.0	25.5	100
LM LT SP		52 32	99	31	5.8	4.2	90	70	29	22	50	65.3	10.9	86	83.4	3.3	100	28.1	25.0	98
WEST																				
ARIZONA																				
BOWIE				STONEVILLE 213						94 PERCENT										
SLM		41 35	101	34	6.8	4.7	100	90	15	12	58	67.5	11.1	91	84.6	3.4	103	27.9	25.6	101
SLM		41 35	95	32	6.5	4.8	110	90	20	15	48	65.9	10.2	85	84.2	3.2	103	26.5	25.3	102
SLM		41 35	99	32	6.8	4.7	110	90	18	16	48	71.6	10.3	97	83.3	3.1	101	28.0	24.9	98
SLM		41 35	99	34	7.0	5.2	80	70	29	26	57	72.4	9.3	95	85.2	2.9	106	28.6	25.3	98
BUCKEYE				DELTAPINE 61						95 PERCENT										
M LT SP		32 35	104	33	6.1	4.1	130	90	11	10	61	70.7	11.0	97	83.8	2.8	103	27.1	26.4	105
SLM		41 35	104	34	5.9	4.1	100	90	23	11	53	69.6	10.5	94	82.5	3.0	99	28.8	25.9	100
SLM		41 35	104	35	5.8	4.4	110	80	18	17	55	69.8	9.3	90	84.2	3.1	103	27.8	25.1	99

1/ Reduced from 41 because of bark
2/ End breakage too high to spin 50s yarn. 44s spun and strength adjusted to equivalent of 50s.

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
WEST														
ARIZONA														
BUCKEYE			STONEVILLE 213				100 PERCENT							
SLM	41	35	1.11	45	4.9	91	23	5.7	2.3	3.0	2	3	100	6.1
SLM	41	35	1.08	46	5.1	95	22	4.9	1.6	3.4	2	2	96	6.3
SLM	41	35	1.10	44	4.9	89	22	4.9	1.8	2.6	2	2	99	7.7
CASA GRANDE			DELTAPINE 61				75 PERCENT							
M	31	35	1.13	44	5.0	84	24	7.1	1.3	1.9	1	3	104	5.6
SLM	41	36	1.14	44	4.7	84	24	6.5	1.7	2.6	2	3	100	6.1
SLM	41	35	1.12	45	4.2	80	22	6.8	1.7	2.8	2	2	98	6.5
MARICOPA			DELTAPINE 16				100 PERCENT							
SLM	41	35	1.13	45	5.4	90	23	6.9	1.4	2.0	2	2	96	5.1
SLM	41	36	1.15	44	4.7	81	23	6.7	1.9	3.0	2	3	97	5.8
LM	51	36	1.14	44	4.6	80	23	6.8	1.8	3.0	4	2	88	5.4
PALO VERDE			DELTAPINE 16				83 PERCENT							
SLM	41	35	1.07	44	4.9	85	22	5.6	1.5	2.2	2	2	100	6.7
1/ LM	51	35	1.06	45	5.0	91	24	5.4	1.5	2.7	2	3	99	6.2 2/
SLM	41	35	1.09	44	4.8	90	23	6.1	1.3	2.4	2	2	99	6.2
PICACHO			DELTAPINE 66				88 PERCENT							
M LT SP	32	35	1.12	43	4.0	88	22	6.5	1.5	2.2	1	3	101	5.4
LM	51	35	1.09	43	3.9	86	23	6.0	2.7	3.7	4	2	88	6.4
LM	51	35	1.07	42	4.0	86	23	6.0	3.0	4.8	3	2	90	6.4
SOMERTON			DELTAPINE 61				92 PERCENT							
M	31	35	1.11	44	4.1	82	23	6.7	1.2	2.4	1	3	103	5.6
SLM	41	35	1.09	43	3.9	89	24	5.4	2.1	3.2	1	3	103	6.0
SLM	41	35	1.08	44	4.7	82	22	6.2	1.3	2.7	1	3	101	7.2
SLM	41	35	1.13	44	5.0	84	23	6.5	1.5	2.5	2	2	98	6.3
CALIFORNIA														
BAKERSFIELD			ACALA SJ-2				100 PERCENT							
SLM	41	35	1.12	47	4.2	99	26	5.7	2.2	2.8	2	3	100	6.2
SLM	41	35	1.13	48	4.5	96	27	5.7	1.8	2.1	2	3	100	5.9
SLM	41	36	1.12	47	4.6	100	26	5.3	2.2	2.8	2	3	99	6.0

1/ Reduced from 41 because of grass
2/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST																				
ARIZONA																				
BUCKEYE				STONEVILLE 213					100 PERCENT											
	SLM	41 35	103	35	5.2	3.8	110	90	14	10	60	71.2	10.5	97	84.6	3.1	104	27.1	25.5	102
	SLM	41 35	95	31	5.0	3.6	120	90	15	10	52	68.8	10.1	90	85.3	3.5	104	27.6	26.1	103
	SLM	41 35	95	30	5.3	3.9	120	90	11	11	50	69.9	9.9	92	83.8	2.8	103	30.1	24.9	93
CASA GRANDE				DELTAPINE 61					75 PERCENT											
	M	31 35	108	36	6.4	4.5	120	90	7	6	65	72.3	10.7	99	86.1	2.8	109	27.1	28.3	113
	SLM	41 36	106	36	6.4	4.5	120	90	13	10	59	68.8	10.1	90	83.9	3.0	103	26.9	25.9	104
	SLM	41 35	105	36	6.4	4.6	100	90	22	19	57	69.4	9.9	91	84.3	3.1	103	28.7	24.8	96
MARICOPA				DELTAPINE 16					100 PERCENT											
	SLM	41 35	102	34	6.3	4.2	120	90	16	10	71	70.5	11.1	97	82.4	2.8	100	27.4	26.4	105
	SLM	41 36	105	37	6.2	4.4	100	70	22	15	61	69.3	10.4	93	83.9	3.5	101	27.9	25.1	99
	LM	51 36	107	38	6.9	4.8	100	80	18	15	65	66.9	9.6	86	85.1	2.9	106	26.8	26.4	106
PALO VERDE				DELTAPINE 16					83 PERCENT											
	SLM	41 35	94	30	5.4	4.0	100	80	20	17	50	69.7	10.2	93	83.8	3.2	102	27.1	25.7	103
	LM 1/	51 35	94	32	5.4	4.3	110	80	18	12	47	69.5	10.5	93	84.4	3.3	103	28.8	25.4	98
	SLM	41 35	91	28	5.3	4.2	90	80	13	12	44	70.7	9.4	92	84.2	2.8	104	29.3	25.5	97
PICACHO				DELTAPINE 66					88 PERCENT											
	M LT SP	32 35	111	38	6.2	4.4	120	80	10	8	70	69.3	11.9	98	83.7	3.1	102	26.6	26.2	106
	LM	51 35	112	39	6.4	4.3	110	80	19	12	63	66.8	10.5	88	83.1	2.5	103	26.4	25.8	104
	LM	51 35	110	38	6.3	4.8	110	90	17	13	62	68.3	9.4	88	85.0	3.3	104	28.3	25.6	100
SOMERTON				DELTAPINE 61					92 PERCENT											
	M	31 35	101	33	5.9	4.3	80	60	20	17	68	71.9	11.0	99	85.0	3.0	105	27.1	27.5	110
	SLM	41 35	110	39	6.1	4.2	100	70	19	11	59	69.5	11.0	95	84.9	3.2	104	27.7	25.7	101
	SLM	41 35	102	34	6.2	4.3	110	80	19	14	56	71.5	10.4	97	84.8	2.8	106	28.0	25.3	99
	SLM	41 35	103	34	6.3	4.0	100	80	19	15	58	70.5	9.5	92	84.4	2.8	105	28.8	26.4	102
CALIFORNIA																				
BAKERSFIELD				ACALA SJ-2					100 PERCENT											
	SLM	41 35	129	48	5.9	4.5	90	80	20	15	74	69.0	11.6	96	84.5	3.3	103	27.2	26.1	104
	SLM	41 35	132	49	6.1	4.4	100	80	12	7	74	69.5	11.4	97	82.5	3.4	98	27.0	26.0	104
	SLM	41 36	129	47	6.1	4.8	100	90	16	10	76	68.8	10.7	93	85.1	3.1	105	27.1	25.1	100

1/ Reduced from 41 because of grass

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
	Grade	Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
WEST														
CALIFORNIA														
BAKERSFIELD			ACALA SJ-2				100 PERCENT							
M	31	35	1.07	48	4.7	97	26	5.6	1.1	1.6	1	4	102	6.0 1/
M	31	35	1.08	47	4.7	97	27	5.5	1.2	1.8	1	3	102	5.8 1/
SLM	41	35	1.10	47	4.5	93	27	5.2	1.3	2.6	1	2	100	5.6
BUTTONWILLOW			ACALA SJ-2				100 PERCENT							
M	31	35	1.10	47	4.7	101	26	5.8	1.0	1.6	1	4	103	5.2
M	31	36	1.09	45	4.4	99	26	5.9	1.0	1.7	1	4	104	6.0
SLM	41	35	1.09	46	4.4	94	27	5.1	1.7	2.5	1	3	101	6.4 1/
CHOWCHILLA			ACALA SJ-2				100 PERCENT							
M	31	36	1.14	47	4.2	102	28	5.6	1.4	2.2	1	3	102	5.5
SLM	41	36	1.12	46	3.6	97	27	5.2	1.5	2.7	2	3	98	5.8
SLM	41	36	1.17	47	4.1	88	26	5.6	1.7	2.9	1	2	101	6.1
CORCORAN			ACALA SJ-2				100 PERCENT							
M	31	35	1.11	48	4.9	98	26	5.7	1.2	1.7	2	4	100	5.4
M	31	35	1.12	46	4.3	102	28	5.3	1.8	1.6	1	3	102	6.0
SLM	41	35	1.09	47	4.4	91	27	5.3	1.3	2.5	2	3	97	5.0
HANFORD			ACALA SJ-2				99 PERCENT							
SLM	41	35	1.12	47	4.3	101	27	5.7	1.6	2.3	2	3	100	5.2
SLM	41	35	1.10	46	4.4	96	25	4.9	0.8	1.6	2	4	98	6.4
SLM	41	35	1.09	47	4.4	94	24	5.0	1.1	2.2	2	3	97	5.9 1/
LOS BANOS			ACALA SJ-2				100 PERCENT							
M	31	35	1.13	47	4.6	93	27	6.2	1.2	1.8	1	3	103	5.9
SLM	41	36	1.13	46	4.2	95	27	5.2	1.8	3.1	2	3	100	6.2
SLM	41	36	1.13	48	4.4	97	26	5.4	1.7	2.7	2	3	99	6.1 1/
LOST HILLS			ACALA SJ-3				100 PERCENT							
SLM+	40	35	1.09	48	4.8	102	30	5.7	1.9	2.6	1	3	102	6.1
SLM	41	35	1.12	47	4.3	96	28	5.9	2.7	3.3	1	3	101	6.4
SLM	41	36	1.13	46	4.8	95	26	5.1	2.1	2.6	1	2	100	6.8

1/ Cotton stuck to processing rolls

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST																				
CALIFORNIA																				
BAKERSFIELD				ACALA SJ-2						100 PERCENT										
M		31 35	119	43	5.4	4.1	100	90	14	9	63	68.9	11.7	96	83.6	3.4	100	27.3	25.9	103
M		31 35	119	42	5.5	4.1	100	80	15	11	58	69.5	10.0	92	83.4	3.2	101	28.1	25.2	99
SLM		41 35	118	42	5.7	4.4	100	80	15	12	64	68.4	10.4	90	85.5	3.3	105	27.8	24.5	96
BUTTONWILLOW				ACALA SJ-2						100 PERCENT										
M		31 35	127	46	5.8	4.4	110	90	10	10	74	70.6	11.3	98	85.4	3.5	104	25.9	26.3	107
M		31 36	121	45	5.8	4.4	110	80	11	11	65	69.6	11.1	96	85.1	3.4	104	25.8	25.9	106
SLM		41 35	120	60	5.8	4.0	100	80	15	12	69	69.6	10.4	93	84.0	3.1	102	27.0	26.4	106
CHOWCHILLA				ACALA SJ-2						100 PERCENT										
M		31 36	131	49	5.8	4.3	90	80	16	13	79	69.2	11.1	95	82.6	3.1	99	27.0	25.3	101
SLM		41 36	135	50	6.0	4.8	90	80	20	16	81	67.6	10.8	90	83.8	3.5	100	26.3	25.7	104
SLM		41 36	126	45	6.3	4.6	100	80	20	14	75	69.9	9.8	92	84.3	4.0	100	26.6	25.1	101
CORCORAN				ACALA SJ-2						100 PERCENT										
M		31 35	121	46	5.7	4.3	100	70	18	15	69	68.9	11.4	95	84.7	2.8	105	26.3	25.6	104
M		31 35	124	47	5.7	4.2	100	70	16	9	68	67.7	11.0	91	84.6	3.0	104	25.8	26.0	106
SLM		41 35	123	46	6.1	4.4	90	80	18	15	71	68.9	10.6	92	83.2	3.3	100	26.8	26.0	104
HANFORD				ACALA SJ-2						99 PERCENT										
SLM		41 35	128	48	5.8	4.5	100	80	12	9	76	68.8	11.2	94	83.6	3.2	101	27.6	25.0	99
SLM		41 35	123	44	5.4	4.4	110	90	13	10	71	66.5	11.3	89	83.3	3.1	101	27.7	25.2	99
SLM		41 35	118	41	5.3	4.1	110	90	11	7	65	69.7	10.6	94	85.1	3.1	105	28.3	24.9	97
LOS BANOS				ACALA SJ-2						100 PERCENT										
M		31 35	124	45	5.9	4.2	90	70	23	16	71	69.6	10.8	95	82.0	2.9	99	26.0	26.1	106
SLM		41 36	126	47	5.6	4.6	100	80	23	14	67	69.3	10.3	92	85.0	3.2	104	26.3	25.7	104
SLM		41 36	126	45	5.7	4.4	100	90	19	14	73	68.4	10.0	89	83.4	3.4	100	26.0	25.2	103
LOST HILLS				ACALA SJ-3						100 PERCENT										
SLM+		40 35	131	50	5.7	4.6	100	80	23	16	73	69.1	11.1	95	83.5	3.5	100	27.1	25.8	103
SLM		41 35	130	50	6.0	4.7	100	70	12	10	73	69.0	11.1	94	82.3	3.1	98	26.9	25.8	103
SLM		41 36	124	46	6.0	4.4	110	90	14	10	70	68.6	10.3	91	85.4	3.0	106	26.0	26.2	107

Table 6.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974 --Continued

State, Production Area, Chronological sampling, and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
			2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Grade		Staple												
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
WEST														
CALIFORNIA														
SAN JOAQUIN			ACALA SJ-2				100 PERCENT							
SLM+	40	36	1.15	47	4.1	89	27	6.3	1.2	2.1	1	3	102	5.9
SLM	41	36	1.13	47	4.6	96	26	5.2	1.5	2.3	1	3	100	6.6
SLM	41	36	1.14	48	4.0	93	27	5.4	2.4	3.4	2	3	99	6.9
STRATFORD			ACALA SJ-2				100 PERCENT							
SLM	41	35	1.09	45	3.1	98	26	5.9	1.7	2.8	2	3	99	5.5
SLM	41	35	1.14	45	4.4	94	27	5.4	1.1	1.7	2	3	97	4.6
M	31	35	1.10	47	4.2	98	29	5.1	1.1	2.3	1	4	103	4.1
TRANQUILITY			ACALA SJ-2				100 PERCENT							
M	31	35	1.12	47	4.5	102	27	5.8	1.9	1.5	1	3	104	5.5
SLM	41	36	1.15	45	4.0	93	25	5.6	1.5	2.5	1	2	101	5.9
SLM+	40	36	1.16	49	4.4	95	28	5.2	2.0	2.4	1	3	102	5.8
TULARE			ACALA SJ-2				100 PERCENT							
SLM	41	35	1.10	46	3.8	95	27	6.0	1.5	2.3	2	3	99	5.8
SLM	41	35	1.10	46	4.1	96	26	6.1	1.5	2.3	1	3	102	6.0
SLM	41	35	1.10	47	4.3	93	27	5.0	1.6	2.5	2	2	100	5.7
VISALIA			ACALA SJ-3				70 PERCENT							
M	31	35	1.10	48	4.5	103	28	5.5	1.8	1.3	1	3	101	4.2
SLM	41	35	1.08	48	4.4	99	27	5.0	0.7	1.5	2	3	96	5.3
SLM	41	35	1.11	47	3.9	91	26	5.5	1.1	2.0	2	2	96	5.3 1/
WESTMORLAND			DELTAPINE 61				100 PERCENT							
M	31	35	1.09	44	4.5	88	23	6.5	1.1	1.9	1	3	102	5.4
M	31	35	1.07	45	4.8	92	27	5.8	1.0	2.0	1	3	103	5.4 1/
M	31	35	1.09	45	5.1	88	24	5.8	0.6	1.2	0	2	105	5.7
SLM	41	34	1.09	42	3.8	88	24	6.4	1.4	3.1	1	2	101	6.2
WEST TEXAS														
PECOS			STONEVILLE 213				100 PERCENT*							
SLM LT SP	42	34	1.08	45	4.5	79	21	7.3	2.3	3.5	4	4	87	6.9
SLM	41	34	1.06	43	4.4	77	21	6.6	1.6	2.5	2	3	96	6.3
LM	51	34	1.07	42	3.7	79	22	7.2	3.2	4.8	2	2	96	8.2

1/ Cotton stuck to processing rolls
* 100 percent selected for tests, less than 100 percent in the area

Table 6a.--Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spin-ning Poten-tial	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Yellow-ness	Com-posite	Reflct-ance	Blue-ness	Com-posite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST																				
CALIFORNIA																				
SAN JOAQUIN				ACALA SJ-2					100 PERCENT											
SLM+		40 36	129	50	6.1	4.7	90	80	13	11	80	69.6	11.0	95	83.5	2.9	102	27.4	26.0	103
SLM		41 36	126	47	5.7	4.5	100	80	19	12	77	67.5	10.1	88	85.0	3.3	104	26.9	25.8	103
SLM		41 36	131	48	6.2	4.6	100	80	16	13	78	70.0	10.8	96	85.3	3.3	105	26.9	25.0	100
STRATFORD				ACALA SJ-2					100 PERCENT											
SLM		41 35	129	49	6.2	4.8	90	70	16	13	82	68.1	11.2	93	84.3	3.5	102	26.7	25.8	104
SLM		41 35	123	49	5.3	4.5	100	70	15	9	82	66.9	10.1	87	83.2	3.4	99	27.1	26.5	106
M		31 35	127	46	5.9	4.4	120	100	12	9	73	67.6	10.7	90	83.5	3.5	100	26.6	25.3	102
TRANQUILITY				ACALA SJ-2					100 PERCENT											
M		31 35	129	48	5.7	4.7	110	90	13	9	77	69.4	11.2	96	83.3	2.9	102	26.9	25.7	103
SLM		41 36	129	47	6.3	4.6	100	80	18	14	83	69.2	10.3	92	84.3	3.1	103	27.0	25.1	100
SLM+		40 36	137	51	6.0	4.7	110	90	13	9	78	68.9	10.4	92	83.0	3.0	100	26.5	26.0	105
TULARE				ACALA SJ-2					100 PERCENT											
SLM		41 35	128	47	5.8	4.4	100	70	8	10	77	67.9	11.5	93	83.5	3.3	100	27.0	25.2	101
SLM		41 35	127	48	6.1	4.5	90	70	12	8	77	69.7	11.2	96	83.2	3.1	101	27.9	25.4	100
SLM		41 35	125	46	5.9	4.4	100	90	18	13	73	67.7	10.3	89	85.0	3.1	105	27.5	25.5	101
VISALIA				ACALA SJ-3					70 PERCENT											
M		31 35	133	50	5.7	4.4	110	70	14	11	79	67.9	11.2	92	83.2	3.3	100	27.5	25.3	100
SLM		41 35	127	47	6.3	4.7	100	90	16	12	72	66.7	10.4	87	83.5	3.3	100	27.9	24.2	95
SLM		41 35	125	45	6.2	4.8	100	90	12	9	73	68.2	10.1	89	83.7	3.5	100	28.0	23.9	94
WESTMORLAND				DELTAPINE 61					100 PERCENT											
M		31 35	108	37	5.9	4.1	90	70	19	12	60	72.1	10.0	97	85.8	2.7	108	26.5	25.9	105
M		31 35	108	35	5.8	4.4	110	80	14	11	51	71.1	10.1	95	85.5	3.0	106	26.5	26.5	107
M		31 35	106	33	5.8	4.1	110	90	12	8	54	71.5	9.7	95	83.7	2.5	104	28.3	26.2	102
SLM		41 34	106	34	6.1	4.4	90	70	24	18	58	70.3	10.0	93	83.8	2.6	104	29.7	25.6	97
WEST TEXAS																				
PECOS				STONEVILLE 213					100 PERCENT *											
SLM LT SP		42 34	95	31	6.4	3.9	100	80	12	8	60	64.7	11.1	85	85.6	4.2	102	26.3	25.9	105
SLM		41 34	97	31	6.5	4.2	90	80	15	10	52	66.7	10.7	88	82.7	3.9	96	28.3	25.2	98
LM		51 34	100	33	6.2	4.5	100	70	19	14	55	69.0	10.3	92	84.8	3.4	103	29.3	25.1	96

* 100 percent selected for tests, less than 100 percent in the area

Table 7.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1974

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH EAST														
ALABAMA														
GERALDINE			COKER 310				100 PERCENT							
LM	51	35	1.16	44	3.9	82	24	8.0	3.9	4.9	3	3	95	8.7
LM	51	35	1.15	42	3.4	83	23	7.1	3.6	4.5	2	3	98	9.0
LM	51	35	1.15	42	3.3	82	26	6.7	3.6	4.9	2	3	98	8.9
GEORGIA														
COMER			COKER 310				100 PERCENT							
SLM	41	35	1.18	43	4.3	83	23	7.4	2.3	3.1	2	3	100	7.9
SLM	41	35	1.12	42	4.1	80	25	6.5	2.3	3.1	2	3	100	7.6
SLM	41	35	1.14	42	4.2	83	22	6.4	2.4	3.7	1	3	101	8.9
MADISON			COKER 310				100 PERCENT							
SLM LT SP	42	35	1.15	43	4.4	83	22	7.0	3.2	4.0	2	3	97	8.4
SLM LT SP	42	34	1.14	42	4.2	82	23	6.4	3.9	4.8	2	3	97	10.0
LM	51	34	1.15	43	4.2	86	23	6.4	4.6	6.0	3	3	92	11.5
NORTH CAROLINA														
DUNN			COKER 310				95 PERCENT							
SLM	41	36	1.16	46	4.2	81	21	6.3	2.9	3.6	2	3	99	8.4
SLM	41	36	1.16	43	3.9	82	23	6.4	2.9	3.9	2	2	100	8.5
SLM	41	35	1.12	41	3.6	82	22	6.6	2.5	3.5	2	3	98	8.0
SOUTH CAROLINA														
HARTSVILLE			COKER 310				100 PERCENT							
SLM	41	36	1.14	43	4.2	80	22	6.8	2.3	3.1	3	3	95	7.8
SLM	41	36	1.16	43	4.1	79	21	7.3	1.9	2.9	2	3	99	7.9
LM	51	35	1.12	44	4.2	79	23	6.0	2.8	3.9	3	3	95	9.6
SOUTH CENTRAL														
MISSISSIPPI														
MORGAN CITY			COKER 310				100 PERCENT							
SLM	41	36	1.17	46	4.7	90	23	5.6	2.2	3.1	3	3	92	8.1
SLM	41	36	1.15	45	4.5	86	22	6.3	3.2	4.0	2	3	97	9.3
LM	51	36	1.14	42	3.2	85	24	6.3	4.3	6.1	2	2	96	10.5

Table 7a.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH EAST																			
ALABAMA																			
GERALDINE			COKER 310					100 PERCENT											
LM	51 35	116	40	6.6	5.1	90	70	22	20	82	67.7	11.6	93	84.0	4.2	98	26.4	26.3	106
LM	51 35	114	39	6.8	5.2	100	70	18	15	75	68.5	11.0	93	82.2	3.2	98	26.8	26.0	104
LM	51 35	115	40	6.9	5.2	100	70	24	19	82	68.6	10.7	92	85.6	3.8	103	27.1	25.5	102
GEORGIA																			
COMER			COKER 310					100 PERCENT											
SLM	41 35	109	37	6.5	4.8	100	80	15	12	63	70.2	11.3	97	82.7	3.4	98	25.9	26.5	108
SLM	41 35	100	33	5.6	4.5	100	70	30	24	62	69.9	10.9	96	85.4	3.2	105	26.3	26.9	109
SLM	41 35	101	33	6.6	4.7	110	80	18	14	64	69.3	10.5	93	84.1	3.1	103	28.0	25.6	100
MADISON			COKER 310					100 PERCENT											
SLM LT SP	42 35	104	34	5.8	4.4	100	80	18	12	63	68.2	11.3	93	84.2	3.1	103	26.7	26.5	107
SLM LT SP	42 34	96	30	5.5	4.0	120	90	13	12	62	69.1	11.4	96	83.5	3.5	100	28.0	25.3	99
LM	51 34	97	32	6.0	4.5	90	70	35	24	59	67.3	10.6	89	84.4	3.2	103	28.3	25.9	101
NORTH CAROLINA																			
DUNN			COKER 310					95 PERCENT											
SLM	41 36	103	33	6.1	4.3	110	80	17	18	61	68.7	10.7	92	83.4	3.0	101	27.1	26.4	105
SLM	41 36	104	36	6.1	4.6	110	70	23	18	70	69.8	10.2	93	82.8	3.3	99	26.9	25.9	104
SLM	41 35	102	32	6.4	4.4	100	70	28	17	63	67.9	10.1	89	83.8	3.1	102	29.1	25.1	96
SOUTH CAROLINA																			
HARTSVILLE			COKER 310					100 PERCENT											
SLM	41 36	103	33	6.1	4.4	120	80	13	13	65	67.5	10.8	90	87.5	3.1	111	27.2	26.9	107
SLM	41 36	104	35	6.2	4.5	100	80	15	10	71	68.7	10.5	92	84.5	3.1	104	26.8	26.3	106
LM	51 35	93	29	5.6	4.0	110	90	20	16	61	67.8	10.1	88	84.5	3.5	102	27.9	26.6	105
SOUTH CENTRAL																			
MISSISSIPPI																			
MORGAN CITY			COKER 310					100 PERCENT											
SLM	41 36	100	31	5.1	3.8	100	80	18	14	63	66.4	10.6	87	82.6	3.1	99	26.9	26.5	106
SLM	41 36	104	33	5.9	4.2	120	90	9	9	64	67.2	10.3	88	84.7	3.0	104	26.2	26.1	106
LM	51 36	108	35	6.3	4.5	90	70	28	21	63	67.6	9.5	87	85.6	3.1	106	26.9	25.3	101

Table 7.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling and Classification			Digital Fibrograph		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & Card waste
Grade		Staple	2.5% span length	50/2.5 unif.		Zero Gage	1/8" Gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Composite color	
Name	Code	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.
SOUTH CENTRAL														
TENNESSEE														
TRENTON		**COKER 310**				**90 PERCENT**								
SLM	41	35	1.14	44	4.1	83	24	7.6	2.3	3.2	1	3	101	8.4
SLM	41	35	1.15	42	4.0	85	23	7.0	2.2	2.8	2	3	99	8.2
SLM	41	35	1.14	43	3.5	80	23	6.9	2.2	4.5	1	2	100	8.6
WEST														
NEW MEXICO														
ANIMAS		**ACALA 1517-V**				**75 PERCENT**								
SLM	41	37	1.17	45	3.5	91	25	6.4	2.1	3.2	2	3	99	7.2
SLM	41	37	1.18	45	3.3	89	28	5.9	1.8	2.9	1	2	103	7.9
SLM	41	37	1.15	44	3.2	94	26	6.0	2.5	3.8	1	2	102	6.7
SLM	41	37	1.18	45	3.4	97	28	5.6	1.9	2.7	1	3	103	8.1
ARTESIA		**ACALA 1517-70**				**70 PERCENT**								
SLM	41	37	1.14	44	4.0	92	25	6.4	1.3	2.3	2	3	97	7.5
SLM	41	37	1.18	44	3.6	97	26	5.7	1.3	2.1	2	2	97	6.7
SLM	41	36	1.17	43	3.7	95	26	5.7	1.6	2.5	2	2	97	7.8
BERINO		**ACALA 1517-70**				**90 PERCENT**								
SLM	41	36	1.16	47	3.9	90	26	6.7	1.6	2.2	1	3	100	7.0
SLM	41	36	1.19	46	3.8	90	29	5.8	1.5	2.3	2	2	100	7.2
SLM	41	37	1.10	44	3.5	90	25	5.6	1.3	2.3	1	2	101	7.5
WEST TEXAS														
EL PASO		**ACALA 1517-C**				**100 PERCENT***								
SLM	41	37	1.18	45	4.1	92	28	5.6	1.2	2.2	3	2	94	6.6
SLM	41	37	1.16	45	4.0	96	27	5.1	1.7	2.7	2	2	96	7.1
SLM	41	36	1.17	44	4.0	98	27	5.3	1.6	3.4	2	2	99	7.7
SLM	41	36	1.17	46	3.8	94	27	6.1	1.9	2.9	1	1	101	8.2

* 100 percent selected for tests, less than 100 percent in the area

Table 7a.--Cotton, American upland long staple: Quality characteristics by production areas, crop of 1974--Continued

State, Production Area, Chronological sampling, and Classification			Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns.		Spinning Potential	Color - 22s gray yarn			Color-22s blchd. yarn			Color - 22s dyed yarn		
	Grade	Staple	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex		Reflctance	Yellowness	Composite	Reflctance	Yellowness	Composite	Reflctance	Blueness	Composite
Name	Code	32d In.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
SOUTH CENTRAL																				
TENNESSEE																				
TRENTON				COKER 310						90 PERCENT										
SLM		41 35	106	35	6.1	4.5	100	70	22	16	65	69.2	10.8	94	84.0	3.5	101	26.3	26.6	108
SLM		41 35	107	36	6.2	4.6	90	70	20	16	65	68.7	11.2	94	84.8	3.3	104	26.5	25.5	103
SLM		41 35	107	35	6.6	4.7	110	80	15	10	71	69.6	10.4	93	86.9	3.4	108	26.5	25.5	103
WEST																				
NEW MEXICO																				
ANIMAS				ACALA 1517-V						75 PERCENT										
SLM		41 37	135	49	6.4	4.9	100	80	15	11	99	67.5	10.8	90	87.0	3.3	109	26.9	25.2	101
SLM		41 37	138	50	6.8	5.2	90	70	23	21	99	69.6	10.6	94	85.4	3.4	105	27.8	25.8	102
SLM		41 37	129	45	6.3	4.8	100	90	20	20	88	67.8	10.5	90	84.3	3.1	103	28.2	24.4	95
SLM		41 37	131	46	6.7	5.1	110	90	17	9	88	70.2	10.7	96	84.7	2.8	105	28.2	25.4	99
ARTESIA				ACALA 1517-70						70 PERCENT										
SLM		41 37	125	43	6.0	4.4	90	70	17	14	80	65.8	10.8	87	83.2	3.8	98	27.1	25.1	100
SLM		41 37	132	49	6.1	4.8	80	70	26	21	94	69.7	10.2	93	84.3	2.5	106	27.6	25.3	100
SLM		41 36	126	45	6.0	4.5	100	70	17	10	85	69.0	9.7	90	84.1	3.2	102	29.9	23.9	90
BERINO				ACALA 1517-70						90 PERCENT										
SLM		41 36	130	48	6.1	4.8	100	70	19	14	91	68.7	11.4	95	83.9	3.0	103	27.2	25.5	102
SLM		41 36	123	44	6.0	4.7	90	70	21	14	84	68.5	10.2	90	85.7	3.4	105	28.2	25.9	101
SLM		41 37	118	42	5.8	4.5	90	70	31	26	77	69.5	10.5	93	84.3	3.2	103	27.7	24.3	96
WEST TEXAS																				
EL PASO				ACALA 1517-C						100 PERCENT*										
SLM		41 37	120	43	6.3	4.6	100	80	22	14	85	67.5	9.9	87	84.1	3.2	102	26.7	25.8	104
SLM		41 37	132	47	5.7	4.7	110	90	16	11	94	66.1	10.0	85	83.6	3.5	100	28.3	25.2	98
SLM		41 36	126	45	5.6	4.7	90	70	17	13	88	67.9	9.6	87	84.2	2.6	105	29.1	25.4	97
SLM		41 36	124	44	6.2	4.7	100	80	18	12	86	70.2	9.5	91	83.1	3.1	100	28.5	24.5	95

* 100 percent selected for tests, less than 100 percent in the area

Table 7b.--Cotton: Combed yarn processing test results for long staple varieties, by state and market area for samples of modal quality, collected at triweekly intervals, crop of 1974--Continued

State, Production Area, Chronological Sampling and Classification			Comber waste	Yarn skein strength			Yarn elongation		Yarn appearance			Yarn imperfections	
Grade		Staple		22s or 27 tex	50s or 12 tex	Average Break Factor	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Average	22s or 27 tex	50s or 12 tex
Name	Code	32d in.	Pct.	Lbs.	Lbs.	No.	Pct.	Pct.	Index	Index	Index	No.	No.
SOUTH EAST													
ALABAMA													
GERALDINE			COKER 310				100 PERCENT						
LM	51	35	15.6	134	48	2674	7.0	5.6	120	90	105	10	7
LM	51	35	19.2	132	46	2602	7.3	5.5	110	90	100	10	10
LM	51	35	15.2	131	46	2591	7.2	5.4	100	90	95	11	10
GEORGIA													
COMER			COKER 310				100 PERCENT						
SLM	41	35	16.8	126	45	2511	6.8	5.2	120	90	105	6	5
SLM	41	35	18.3	119	41	2334	6.6	5.2	100	80	90	14	12
SLM	41	35	17.0	119	42	2359	7.2	5.1	120	100	110	6	5
MADISON			COKER 310				100 PERCENT						
SLM LT SP	42	35	17.7	122	43	2417	6.5	5.0	120	90	105	6	4
SLM LT SP	42	34	17.1	115	39	2240	6.3	4.6	120	100	110	6	5
LM	51	34	17.2	118	42	2348	6.7	5.1	110	90	100	14	11
NORTH CAROLINA													
DUNN			COKER 310				95 PERCENT						
SLM	41	36	17.9	121	43	2406	6.5	4.9	110	100	105	11	7
SLM	41	36	17.6	122	43	2417	6.8	5.2	120	100	110	7	4
SLM	41	35	18.7	122	42	2392	7.2	5.2	110	90	100	13	9
SOUTH CAROLINA													
HARTSVILLE			COKER 310				100 PERCENT						
SLM	41	36	19.3	120	42	2370	6.4	4.9	110	90	100	7	5
SLM	41	36	15.2	122	43	2417	6.5	5.1	110	100	105	5	5
LM	51	35	17.0	111	38	2171	6.5	4.9	110	100	105	6	6
SOUTH CENTRAL													
MISSISSIPPI													
MORGAN CITY			COKER 310				100 PERCENT						
SLM	41	36	19.7	123	43	2428	5.8	4.3	120	100	110	8	7
SLM	41	36	17.4	121	43	2406	6.0	4.8	130	100	115	4	3
LM	51	36	18.1	126	44	2486	6.8	4.9	100	80	90	13	8

Table 7b.--Cotton: Combed yarn processing test results for long staple varieties, by state and market area for samples of modal quality, collected at triweekly intervals, crop of 1974--Continued

State, Production Area, Chronological Sampling and Classification			Comber waste	Yarn skein strength			Yarn elongation		Yarn appearance			Yarn imperfections	
Grade		Staple		22s or 27 tex	50s or 12 tex	Average Break Factor	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	Average	22s or 27 tex	50s or 12 tex
Name	Code	32d in.	Pct.	Lbs.	Lbs.	No.	Pct.	Pct.	Index	Index	Index	No.	No.
SOUTH CENTRAL													
TENNESSEE													
TRENTON			COKER 310				90 PERCENT						
SLM	41	35	17.6	126	45	2511	6.6	5.0	120	00	110	8	7
SLM	41	35	18.0	127	45	2522	6.8	5.3	100	90	95	8	8
SLM	41	35	17.3	126	43	2461	7.2	5.3	110	90	100	7	5
WEST													
NEW MEXICO													
ANIMAS			ACALA 1517-V				75 PERCENT						
SLM	41	37	13.7	155	56	3105	7.0	5.4	120	90	105	7	4
SLM	41	37	14.0	154	56	3094	7.4	5.7	110	80	95	14	9
SLM	41	37	16.0	149	54	2989	7.0	5.4	110	90	100	8	6
SLM	41	37	15.3	151	55	3036	6.8	5.3	120	100	110	8	6
ARTESIA			ACALA 1517-70				70 PERCENT						
SLM	41	37	17.5	147	53	2942	6.4	4.9	100	90	95	7	7
SLM	41	37	14.0	150	55	3025	6.7	5.1	90	70	80	13	12
SLM	41	36	17.3	149	55	3014	6.5	4.8	100	100	100	10	6
BERINO			ACALA 1517-70				90 PERCENT						
SLM	41	36	15.8	145	54	2945	6.5	5.2	100	90	95	7	6
SLM	41	36	15.3	145	52	2895	6.4	5.2	100	90	95	13	12
SLM	41	37	16.7	140	51	2815	6.6	5.0	100	80	90	14	12
WEST TEXAS													
EL PASO			ACALA 1517-C				100 PERCENT*						
SLM	41	37	10.8	138	51	2793	6.4	5.0	110	90	100	8	5
SLM	41	37	14.8	150	55	3025	6.0	4.8	120	100	110	4	5
SLM	41	36	14.8	149	54	2989	6.5	5.0	110	100	105	8	5
SLM	41	36	15.5	145	53	2920	6.2	5.2	120	100	110	9	5

* 100 percent selected for tests, less than 100 percent in the area

Table 8.--Cotton, American Pima extra long staple: Quality characteristics by production area, crop of 1974

State, Production Area, Chronological Sampling and Classification		Array length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Comber waste
Grade	Staple	Upper Quartile	Coeff. of Var'n		Zero gage	1/8" gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Com-posite		
	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.	Pct.
WEST														
ARIZONA														
Bowie			Pima S-4				100 Percent							
4	44	1.48	28	3.4	102	33	7.5	1.7	3.2	4	6	88	7.3	16.6
4	44	1.42	32	3.8	96	34	7.4	1.4	2.6	4	5	88	8.4	16.8
4	44	1.43	33	3.2	95	32	7.7	1.3	2.5	4	6	89	9.1	17.5
Casa Grande			Pima S-4				100 Percent							
4	44	1.48	27	4.0	103	32	6.4	2.1	3.5	4	5	88	7.1	17.0
4	44	1.48	32	3.8	101	32	6.8	1.5	2.5	4	5	90	9.5	18.0
4	44	1.50	32	3.7	101	33	6.8	1.9	2.9	4	4	90	7.8	18.9
Queen Creek			Pima S-4				100 Percent							
4	44	1.46	30	4.1	103	32	6.5	2.0	2.7	4	5	86	7.4	16.3
3	44	1.47	32	3.7	101	33	6.6	1.6	2.7	3	5	93	7.4	18.1
4	46	1.48	30	3.8	103	34	6.8	2.3	3.6	4	5	91	7.2	17.6
NEW MEXICO														
Las Cruces			Pima S-4				90 Percent							
3	44	1.46	29	3.9	103	33	6.6	1.0	1.6	4	5	91	7.1	16.6
4	44	1.43	31	3.5	101	32	7.1	1.1	2.1	4	5	87	7.6	18.3
4	44	1.39	36	3.1	97	28	6.9	2.7	4.2	4	5	88	8.8	20.1
WEST TEXAS														
Fabens			Pima S-4				100 Percent							
5	44	1.46	31	3.5	99	33	7.6	1.1	2.6	5	5	83	7.4	16.8
4	44	1.46	32	3.2	101	30	7.1	1.3	2.8	4	5	88	7.0	17.6
4	44	1.43	34	3.6	101	32	7.5	1.8	3.2	4	5	88	7.7	18.3
4	44	1.36	35	3.1	99	30	7.1	2.5	4.4	4	5	89	8.6	19.2
Pecos			Pima S-4				100 Percent*							
4	44	1.42	34	3.6	100	33	7.0	1.0	2.3	5	5	85	6.9	18.9
5	44	1.41	36	3.1	95	30	6.7	1.6	3.2	6	6	80	8.8	19.4
4	44	1.41	35	3.0	96	30	7.3	1.3	3.0	5	6	84	10.1	20.8

* 100 percent selected for tests, less than 100 percent in the area

Table 8.--Cotton, American Pima extra long staple: Quality characteristics by production area, crop of 1974-- Continued

State, Production Area, Chronological Sampling and Classification		Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 50s gray yarn			Color-50s bleached yarn			Color - 50s dyed yarn		
Grade	Staple	50s or 12 tex	80s or 7.4 tex	50s or 12 tex	80s or 7.4 tex	50s or 12 tex	80s or 7.4 tex	50s or 12 tex	80s or 7.4 tex	Reflectance	Yellowness	Composite	Reflectance	Yellowness	Composite	Reflectance	Blueness	Composite
	32d in.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd	+b	Index	Rd	+b	Index	Rd	-b	Index
WEST																		
ARIZONA																		
Bowie					Pima S-4					100 Percent								
4	44	63	33	5.5	4.4	110	110	1	1	63.1	12.9	87	83.9	3.6	100	27.7	25.8	102
4	44	63	34	5.7	4.9	110	120	1	1	63.7	12.7	88	83.0	3.9	97	28.7	25.8	100
4	44	62	34	5.8	4.8	110	110	3	3	61.4	13.6	86	84.2	4.0	99	28.2	25.4	99
Casa Grande					Pima S-4					100 Percent								
4	44	68	36	5.4	4.5	120	110	1	1	64.1	12.4	88	83.7	3.8	99	28.9	24.7	95
4	44	67	35	5.4	4.4	110	110	2	1	66.2	12.5	93	83.5	3.6	99	29.5	25.4	97
4	44	66	36	5.7	4.8	110	120	1	1	64.8	12.5	90	84.1	3.3	102	31.0	25.1	92
Queen Creek					Pima S-4					100 Percent								
4	44	65	36	5.5	4.7	110	120	2	1	64.1	12.8	89	85.5	3.9	103	29.2	25.3	97
3	44	66	36	5.6	4.8	110	120	1	0	67.4	12.6	97	83.6	3.4	100	29.0	26.3	101
4	46	67	37	5.7	4.8	120	120	1	1	66.7	12.3	94	84.2	3.3	102	28.4	25.7	100
NEW MEXICO																		
Las Cruces					Pima S-4					90 Percent								
3	44	65	35	5.7	4.8	110	110	2	1	63.2	12.6	86	84.5	3.9	100	26.1	25.5	104
4	44	63	34	5.7	4.8	110	110	3	2	63.3	12.7	87	84.2	3.8	100	28.8	26.0	100
4	44	62	33	5.6	4.8	110	110	3	1	62.4	12.5	85	83.5	3.7	99	28.7	25.5	99
WEST TEXAS																		
Fabens					Pima S-4					100 Percent								
5	44	62	34	5.2	4.5	110	120	1	1	61.3	12.5	83	82.7	2.8	101	27.4	25.2	100
4	44	64	34	5.5	4.8	110	110	3	1	62.3	12.6	85	85.9	4.2	103	26.7	25.2	101
4	44	62	34	5.2	4.6	110	120	2	2	64.7	12.7	90	85.1	4.0	101	27.2	25.5	102
4	44	64	35	5.8	4.9	110	120	3	3	63.6	12.8	88	84.0	3.6	100	29.8	25.5	96
Pecos					Pima S-4					100 Percent*								
4	44	62	34	5.3	4.8	110	110	2	2	61.0	12.6	82	84.1	3.7	100	26.7	25.6	103
5	44	60	33	5.4	4.6	100	100	5	5	63.7	12.8	88	84.3	4.1	99	29.2	25.6	98
4	44	64	34	5.8	5.0	100	90	6	4	63.2	13.4	89	84.5	4.4	98	30.5	24.8	92

* 100 percent selected for tests, less than 100 percent in the area

Table 9.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 57 short staple samples collected at triweekly intervals from selected gin points, crop of 1974

Item	Grade	Staple	Fiber length		Micronaire	Fiber strength		Elongation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Spinning Potential
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Grayness	Yellowness	Composite		
	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.	No.
Sample Distribution:															
Mean	87.8	30.9	.96	43.8	3.8	82.5	20.7	6.30	2.53	3.95	3.1	3.6	92.5	7.25	40.3
Standard deviation (±)	5.3	1.0	.04	1.4	.7	4.4	1.5	.69	.85	1.13	1.3	.5	6.3	.91	6.5
Correlation Coef. for:															
Classification:															
Grade.....index		+.29	+.32	+.14	+.26	+.20	+.21	-.03	-.56	-.58	-.49	+.18	+.45	-.62	+.21
Staple.....32d inches	+.29		+.81	-.05	+.02	.00	+.59	+.34	+.16	+.07	-.34	+.30	+.33	-.22	+.74
Fiber length:															
2.5% span.....inches	+.32	+.81		+.03	+.18	+.02	+.70	+.32	+.01	-.08	-.24	+.07	+.22	-.33	+.67
50/2.5.....pct	+.14	-.05	+.03		+.37	+.12	+.28	-.06	-.05	-.12	-.10	-.16	+.11	-.04	+.10
Micronaire.....reading	+.26	+.02	+.18	+.37		+.53	+.15	-.50	-.59	-.68	+.45	-.17	-.51	-.36	-.30
Fiber strength:															
Zero gage.....Mpsi	+.20	.00	+.02	+.12	+.53		+.12	-.73	-.32	-.42	+.32	+.02	-.32	-.22	-.14
1/8" gage.....grams/tex	+.21	+.59	+.70	+.28	+.15	+.12		+.28	+.18	+.06	-.33	+.06	+.27	-.07	+.60
Elongation (1/8").....pct	-.03	+.34	+.32	-.06	-.50	-.73	+.28		+.38	+.42	-.49	-.05	+.49	+.06	+.53
Shirley Analyzer:															
Visible waste.....pct	-.56	+.16	+.01	-.05	-.59	-.32	+.18	+.38		+.95	-.10	+.07	+.17	+.66	+.37
Total waste.....pct	-.58	+.07	-.08	-.12	-.68	-.42	+.06	+.42	+.95		-.15	+.03	+.20	+.71	+.28
Color of raw stock:															
Grayness.....No.	-.49	-.34	-.24	-.10	+.45	+.32	-.33	-.49	-.10	-.15		-.20	-.97	+.11	-.53
Yellowness.....No.	+.18	+.30	+.07	-.16	-.17	+.02	+.06	-.05	+.07	+.03	-.20		+.22	+.07	+.18
Composite.....index	+.45	+.33	+.22	+.11	-.51	-.32	+.27	+.49	+.17	+.20	-.97	+.22		-.10	+.55
Picker & card waste.....pct	-.62	-.22	-.33	-.04	-.36	-.22	-.07	+.06	+.66	+.71	+.11	+.07	-.10		-.17
Spinning Potential.....No.	+.21	+.74	+.67	+.10	-.30	-.14	+.60	+.53	+.37	+.28	-.53	+.18	+.55	-.17	
Yarn skein strength:															
8s (74 tex).....pounds	+.24	+.64	+.57	+.02	-.49	-.27	+.55	+.62	+.40	+.36	-.70	+.22	+.73	-.06	+.88
22s (27 tex).....pounds	+.27	+.69	+.61	+.06	-.37	-.12	+.64	+.53	+.37	+.30	-.63	+.23	+.65	-.12	+.94
Yarn elongation:															
8s (74 tex).....pct	+.16	+.51	+.42	-.04	-.61	-.51	+.40	+.78	+.44	+.45	-.71	+.16	+.74	+.08	+.75
22s (27 tex).....pct	+.07	+.55	+.49	-.05	-.58	-.55	+.44	+.80	+.44	+.45	-.64	+.09	+.65	-.05	+.78
Yarn appearance:															
8s (74 tex).....index	+.34	-.08	-.10	+.40	+.60	+.58	-.01	-.53	-.45	-.50	+.12	-.10	-.13	-.37	-.16
22s (27 tex).....index	+.45	-.02	+.20	+.41	+.57	+.38	+.21	-.28	-.41	-.53	+.08	-.08	-.11	-.49	-.01
Yarn imperfections:															
8s (74 tex).....No.	-.51	+.14	+.05	-.43	-.67	-.61	+.01	+.61	+.56	+.65	-.18	+.04	+.18	+.52	+.18
22s (27 tex).....No.	-.44	+.19	+.06	-.47	-.64	-.53	+.03	+.56	+.58	+.64	-.24	+.11	+.24	+.53	+.22
Color - 22s gray yarn:															
Reflectance.....Rd	+.32	+.21	+.25	-.01	-.38	-.22	+.28	+.46	+.11	+.18	-.72	-.04	+.72	-.05	+.41
Yellowness.....+b	-.01	+.23	-.01	-.11	-.63	-.17	+.11	+.30	+.49	+.49	-.47	+.56	+.53	+.29	+.40
Composite.....index	+.24	+.24	+.20	-.05	-.54	-.24	+.28	+.49	+.26	+.33	-.75	+.12	+.77	+.07	+.47
Color-22s bleached yarn:															
Reflectance.....Rd	+.05	+.05	-.02	+.14	+.04	-.02	+.13	-.04	-.04	-.02	-.20	-.03	+.13	+.15	-.02
Yellowness.....+b	-.13	+.03	+.10	-.11	-.03	-.15	+.09	+.09	+.01	+.03	+.23	-.03	-.27	+.07	+.03
Composite.....index	+.10	+.03	-.08	+.16	+.04	+.05	+.06	-.08	-.05	-.04	-.27	.00	+.24	+.10	-.04
Color - 22s dyed yarn:															
Reflectance.....Rd	-.30	-.41	-.36	-.26	-.02	+.12	-.30	-.30	-.02	+.06	+.43	-.25	-.44	+.16	-.47
Blueness.....-b	+.50	+.18	+.16	+.38	+.26	-.01	+.12	+.12	-.21	-.26	-.35	-.02	+.32	-.48	+.20
Composite.....index	-.36	+.33	+.28	+.37	+.19	-.07	+.22	+.22	-.14	-.21	-.45	+.10	+.43	-.41	+.35

Table 9.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 22s gray yarn			Color-22s bleached yarn			Color - 22s dyed yarn		
	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd.	+b	Index	Rd	+b	Index	Rd	-b	Index
Sample Distribution:																	
Mean.....	297.4	90.1	7.2	6.3	113.0	90.9	43.8	26.8	66.0	11.4	89.3	83.2	3.9	97.5	28.1	25.1	98.1
Standard deviation (±)..	26.1	10.2	.9	.8	13.5	14.4	21.1	12.8	2.7	.6	6.1	1.6	.6	4.5	.9	.8	4.4
Correlation Coef. for:																	
Classification:																	
Grade.....index	+.24	+.27	+.16	+.07	+.34	+.45	-.51	-.44	+.31	+.01	+.24	+.05	-.13	+.10	-.30	+.50	-.36
Staple.....32d inches	+.64	+.69	+.51	+.55	-.08	-.02	+.14	+.19	+.21	+.23	+.24	+.05	+.03	+.03	-.41	+.18	+.33
Fiber length:																	
2.5% span.....inches	+.57	+.61	+.42	+.49	-.10	+.20	+.05	+.06	+.25	-.01	+.20	-.02	+.10	-.08	-.36	+.16	+.28
50/2.5.....pct	+.02	+.06	-.04	-.05	+.40	+.41	-.43	-.47	-.01	-.11	-.05	+.14	-.11	+.16	-.26	+.38	+.37
Micronaire.....reading	-.49	-.37	-.61	-.58	+.60	+.57	-.67	-.64	-.38	-.63	-.54	+.04	-.03	+.04	-.02	+.26	+.19
Fiber strength:																	
Zero gage.....Mpsi	-.27	-.12	-.51	-.55	+.58	+.38	-.61	-.53	-.22	-.17	-.24	-.02	-.15	+.05	+.12	-.01	-.07
1/8" gage.....grams/tex	+.55	+.64	+.40	+.44	-.01	+.21	+.01	+.03	+.28	+.11	+.28	+.13	+.09	+.06	-.30	+.12	+.22
Elongation (1/8")...pct	+.62	+.53	+.78	+.80	-.53	-.28	+.61	+.56	+.46	+.30	+.49	-.04	+.09	-.08	-.30	+.12	+.22
Shirley Analyzer:																	
Visible waste.....pct	+.40	+.37	+.44	+.44	-.45	-.41	+.56	+.58	+.11	+.49	+.26	-.04	+.01	-.05	-.02	-.21	-.14
Total waste.....pct	+.36	+.30	+.45	+.45	-.50	-.53	+.65	+.64	+.18	+.49	+.33	-.02	+.03	-.04	+.06	-.26	-.21
Color of raw stock:																	
Grayness.....No.	-.70	-.63	-.71	-.64	+.12	+.08	-.18	-.24	-.72	-.47	-.75	-.20	+.23	-.27	+.43	-.35	-.45
Yellowness.....No.	+.22	+.23	+.16	+.09	-.10	-.08	+.04	+.11	-.04	+.56	+.12	-.03	-.03	.00	-.25	-.02	+.10
Composite.....index	+.73	+.65	+.74	+.65	-.13	-.11	+.18	+.24	+.72	+.53	+.77	+.13	-.27	+.24	-.44	+.32	+.43
Picker & card waste..pct	-.06	-.12	+.08	-.05	-.37	-.49	+.52	+.53	-.05	+.29	+.07	+.15	+.07	+.10	+.16	-.48	-.41
Spinning Potential...No.	+.88	+.94	+.75	+.78	-.16	-.01	+.18	+.22	+.41	+.40	+.47	-.02	+.03	-.04	-.47	+.20	+.35
Yarn skein strength:																	
8s (74 tex).....pounds		+.95	+.89	+.88	-.28	-.12	+.32	+.35	+.60	+.46	+.65	+.02	+.06	-.02	-.40	+.09	+.25
22s (27 tex).....pounds	+.95		+.81	+.81	-.15	.00	+.21	+.26	+.55	+.44	+.61	+.01	+.06	-.03	-.39	+.10	+.25
Yarn elongation:																	
8s (74 tex).....pct	+.89	+.81		+.95	-.48	-.28	+.51	+.54	+.60	+.50	+.67	+.01	.00	+.01	-.42	+.11	+.27
22s (27 tex).....pct	+.88	+.81	+.95		-.50	-.33	+.57	+.59	+.55	+.39	+.59	+.04	+.11	-.02	-.37	+.04	+.20
Yarn appearance:																	
8s (74 tex).....index	-.28	-.15	-.48	-.50		+.44	-.74	-.72	-.11	-.39	-.23	+.10	-.12	+.14	+.02	+.25	+.16
22s (27 tex).....index	-.12	.00	-.28	-.33	+.44		-.67	-.70	-.05	-.26	-.13	-.05	-.16	+.03	-.09	+.44	+.34
Yarn imperfections:																	
8s (74 tex).....No.	+.32	+.21	+.51	+.57	-.74	-.67		+.94	+.32	+.33	+.39	-.05	+.17	-.12	-.01	-.38	-.27
22s (27 tex).....No.	+.35	+.26	+.54	+.59	-.72	-.70	+.94		+.31	+.37	+.39	-.07	+.08	-.09	-.07	-.38	-.24
Color - 22s gray yarn:																	
Reflectance.....Rd	+.60	+.55	+.60	+.55	-.11	-.05	+.32	+.31		+.27	+.95	-.01	-.13	+.05	-.27	+.12	+.21
Yellowness.....+b	+.46	+.44	+.50	+.39	-.39	-.26	+.33	+.37	+.27		+.54	-.18	-.19	-.06	-.28	+.08	+.19
Composite.....index	+.65	+.61	+.67	+.59	-.23	-.13	+.39	+.39	+.95	+.54		-.07	-.18	+.02	-.28	+.09	+.19
Color-22s bleached yarn:																	
Reflectance.....Rd	+.02	+.01	+.01	+.04	+.10	-.05	-.05	-.07	-.01	-.18	-.07		-.10	+.87	-.06	.00	+.04
Yellowness.....+b	+.06	+.06	.00	+.11	-.12	-.16	+.17	+.08	-.13	-.19	-.18	-.10		-.57	+.22	-.43	-.40
Composite.....index	-.02	-.03	+.01	-.02	+.14	+.03	-.12	-.09	+.05	-.06	+.02	+.87	-.57		-.15	+.19	+.21
Color - 22s dyed Yarn:																	
Reflectance.....Rd	-.40	-.39	-.42	-.37	+.02	-.09	-.01	-.07	-.27	-.28	-.28	-.06	+.22	-.15		-.47	-.79
Blueness.....-b	+.09	+.10	+.11	+.04	+.25	+.44	-.38	-.38	+.12	+.08	+.09	.00	-.43	+.19	-.47		+.91
Composite.....index	+.25	+.25	+.27	+.20	+.16	+.34	-.27	-.24	+.21	+.19	+.19	+.04	-.40	+.21	-.79	+.91	

Table 10.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 299 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1974

Item	Grade	Staple	Fiber length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Spinning Potential
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Com-posite		
	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.	No.
Sample Distribution:															
Mean	91.9	34.7	1.10	44.4	4.2	84.9	23.1	6.49	2.12	3.09	2.0	2.8	97.9	6.31	62.5
Standard deviation (±)	4.7	.9	.03	1.8	0.5	5.9	1.8	.81	.82	.99	.9	.6	4.3	.95	8.7
Correlation Coef. for															
Classification:															
Grade.....index		+.23	+.30	+.33	+.23	+.30	+.40	+.03	-.65	-.71	-.68	+.07	+.73	-.63	+.37
Staple.....32d inches	+.23		+.72	+.24	+.09	+.15	+.31	+.02	-.17	-.17	-.23	-.23	+.24	-.26	+.55
Fiber length:															
2.5% span.....inches	+.30	+.72		+.21	+.16	+.11	+.35	+.21	-.14	-.18	-.29	-.16	+.31	-.31	+.62
50/2.5 unif.....pct	+.33	+.24	+.21		+.60	+.52	+.53	-.34	-.13	-.27	-.15	+.19	+.17	-.25	+.36
Micronaire.....reading	+.23	+.09	+.16	+.60		+.26	+.20	-.18	-.14	-.28	+.02	+.14	-.03	-.17	-.10
Fiber strength:															
Zero gage.....Mpsi	+.30	+.15	+.11	+.52	+.26		+.74	-.64	-.24	-.29	-.14	+.20	+.17	-.17	+.32
1/8" gage.....grams/tex	+.40	+.31	+.35	+.53	+.20	+.74		-.36	-.28	-.35	-.34	+.10	+.36	-.31	+.53
Elongation (1/8").....pct	+.03	+.02	+.21	-.34	-.18	-.64	-.36		-.05	-.03	-.18	-.19	+.18	-.11	+.10
Shirley Analyzer:															
Visible waste.....pct	-.65	-.17	-.14	-.13	-.14	-.24	-.28	-.05		+.93	+.41	.00	-.44	+.68	-.24
Total waste.....pct	-.71	-.17	-.18	-.27	-.28	-.29	-.35	-.03	+.93		+.44	-.10	-.48	+.73	-.29
Color of raw stock:															
Grayness.....No.	-.68	-.23	-.29	-.15	+.02	-.14	-.34	-.18	+.41	+.44		+.13	-.94	+.39	-.40
Yellowness.....No.	+.07	-.23	-.16	+.19	+.14	+.20	+.10	-.19	.00	-.10	+.13		-.07	-.04	-.06
Composite.....index	+.73	+.24	+.31	+.17	-.03	+.17	+.36	+.18	-.44	-.48	-.94	-.07		-.43	+.41
Picker & card waste....pct	-.63	-.26	-.31	-.25	-.17	-.17	-.31	-.11	+.68	+.73	+.39	-.04	-.43		-.46
Spinning Potential.....No.	+.37	+.55	+.62	+.36	-.10	+.32	+.53	+.10	-.24	-.29	-.40	-.06	+.41	-.46	
Yarn skein strength:															
22s (27 tex).....pounds	+.42	+.55	+.54	+.46	-.05	+.52	+.74	-.12	-.23	-.29	-.49	+.01	+.51	-.36	+.85
50s (12 tex).....pounds	+.39	+.51	+.49	+.45	-.05	+.49	+.73	-.14	-.22	-.28	-.45	+.04	+.49	-.33	+.81
Yarn elongation:															
22s (27 tex).....pct	+.07	+.28	+.34	-.31	-.48	-.50	-.16	+.69	+.01	+.05	-.33	-.24	+.33	-.11	+.39
50s (12 tex).....pct	+.14	+.26	+.32	-.16	-.47	-.25	+.09	+.50	-.05	-.01	-.42	-.19	+.44	-.14	+.49
Yarn Appearance:															
22s (27 tex).....index	+.19	+.24	+.19	+.35	+.48	+.10	+.10	+.04	-.18	-.24	-.03	-.13	+.04	-.25	+.16
50s (12 tex).....index	+.15	+.18	+.11	+.44	+.49	+.13	+.14	-.04	-.15	-.20	-.02	-.14	+.03	-.18	+.13
Yarn imperfections:															
22s (27 tex).....No.	-.41	-.22	-.20	-.38	-.44	-.20	-.18	-.07	+.41	+.47	+.21	+.10	-.20	+.42	-.29
50s (12 tex).....No.	-.38	-.30	-.24	-.45	-.52	-.20	-.22	-.07	+.37	+.46	+.19	+.08	-.18	+.39	-.32
Color - 22s gray yarn:															
Reflectance.....Rd	+.53	+.26	+.32	+.12	+.09	+.09	+.24	+.14	-.26	-.26	-.72	-.26	+.73	-.23	+.26
Yellowness.....+b	+.05	-.30	-.09	+.21	+.08	+.23	+.12	-.11	+.14	.00	-.02	+.70	+.07	-.03	+.07
Composite.....index	+.54	+.11	+.23	+.20	+.12	+.19	+.28	+.08	-.19	-.26	-.69	+.06	+.74	-.23	+.28
Color-22s bleached yarn:															
Reflectance.....Rd	-.03	+.17	+.18	-.10	-.15	-.13	-.06	+.21	-.01	+.08	-.10	-.22	+.07	+.11	+.08
Yellowness.....+b	-.23	-.18	-.22	-.14	-.34	-.02	-.07	-.11	+.18	+.21	+.19	+.26	-.18	+.16	-.12
Composite.....index	+.09	+.22	+.21	-.03	.00	-.09	-.03	+.23	-.08	-.02	-.17	-.30	+.16	+.04	+.12
Color - 22s dyed yarn:															
Reflectance.....Rd	-.23	-.25	-.29	-.37	-.26	-.07	-.20	-.15	+.07	+.20	+.22	-.09	-.21	+.26	-.38
Blueness.....-b	+.27	+.09	+.26	+.22	+.41	-.01	.00	+.17	-.08	-.20	-.18	+.09	+.20	-.28	+.14
Composite.....index	+.29	+.17	+.31	+.31	+.39	+.01	+.08	+.19	-.09	-.23	-.22	+.10	+.23	-.32	+.26

Table 10.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 22s gray yarn			Color-22s bleached yarn			Color - 22s dyed yarn		
	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
Sample Distribution:	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd.	+b	Index	Rd	+b	Index	Rd	-b	Index
Mean	106.1	36.1	6.3	4.5	100.1	79.2	18.6	14.3	68.2	10.6	91.1	84.2	3.2	102.5	27.3	25.8	102.6
Standard deviation (±)	11.4	6.1	.6	.4	12.6	9.7	6.8	5.6	2.1	.6	4.3	1.3	.3	3.4	1.0	.8	4.6
Correlation Coef. for:																	
Classification:																	
Grade.....index	+.42	+.39	+.07	+.14	+.19	+.15	-.41	-.38	+.53	+.05	+.54	-.03	-.23	+.09	-.23	+.27	+.29
Staple.....32d inches	+.55	+.51	+.28	+.26	+.24	+.18	-.22	-.30	+.26	-.30	+.11	+.17	-.18	+.22	-.25	+.09	+.17
Fiber length:																	
2.5% span.....inches	+.54	+.49	+.34	+.32	+.19	+.11	-.20	-.24	+.32	-.09	+.23	+.18	-.22	+.21	-.29	+.26	+.31
50/2.5 unif.....pct	+.46	+.45	-.31	-.16	+.35	+.44	-.38	-.45	+.12	+.21	+.20	-.10	-.14	-.03	-.37	+.22	+.31
Micronaire.....reading	-.05	-.05	-.48	-.47	+.48	+.49	-.44	-.52	+.09	+.08	+.12	-.15	-.34	.00	-.26	+.41	+.39
Fiber strength:																	
Zero gage.....Mpsi	+.52	+.49	-.50	-.25	+.10	+.13	-.20	-.20	+.09	+.23	+.19	-.13	-.02	-.09	-.07	-.01	+.01
1/8" gage.....grams/tex	+.75	+.73	-.16	+.09	+.10	+.14	-.18	-.22	+.24	+.12	+.28	-.06	-.07	-.03	-.20	.00	+.08
Elongation (1/8")...pct	-.12	-.14	+.69	+.50	+.04	-.04	-.07	-.07	+.14	-.11	+.08	+.21	-.11	+.23	-.15	+.17	+.19
Shirley Analyzer:																	
Visible waste.....pct	-.23	-.22	+.01	-.05	-.18	-.15	+.41	+.37	-.26	+.14	-.19	-.01	+.18	-.08	+.07	-.08	-.09
Total waste.....pct	-.29	-.28	+.05	-.01	-.24	-.20	+.47	+.46	-.26	.00	-.26	+.08	+.21	-.02	+.20	-.20	-.23
Color or raw stock:																	
Grayness.....No.	-.49	-.45	-.33	-.42	-.03	-.02	+.21	+.19	-.72	-.02	-.69	-.10	+.19	-.17	+.22	-.18	-.22
Yellowness.....No.	+.01	+.04	-.24	-.19	-.13	-.14	+.10	+.08	-.26	+.70	+.06	-.22	+.26	-.30	-.09	+.09	+.10
Composite.....index	+.51	+.47	+.33	+.44	+.04	+.03	-.20	-.18	+.73	+.07	+.74	+.07	-.18	+.16	-.21	+.20	+.23
Picker & card waste..pct	-.36	-.33	-.11	-.14	-.25	-.18	+.42	+.39	-.23	-.03	-.23	+.11	+.16	+.04	+.26	-.28	-.32
Spinning Potential...No.	+.85	+.81	+.39	+.49	+.16	+.13	-.29	-.32	+.26	+.07	+.28	+.08	-.12	+.12	-.38	+.14	+.26
Yarn skein strength:																	
22s (27 tex).....pounds		+.96	+.29	+.48	+.07	+.11	-.19	-.24	+.36	+.07	+.37	+.02	-.05	+.04	-.28	-.03	+.10
50s (12 tex).....pounds	+.96		+.25	+.50	+.02	+.08	-.18	-.22	+.32	+.07	+.32	-.01	-.03	-.01	-.24	-.07	+.06
Yarn elongation:																	
22s (27 tex).....pct	+.29	+.25		+.80	-.11	-.13	+.12	+.11	+.24	-.17	+.14	+.25	+.04	+.21	-.10	-.03	+.02
50s (12 tex).....pct	+.48	+.50	+.80		-.20	-.14	+.13	+.15	+.30	-.09	+.24	+.16	+.06	+.11	-.07	-.12	-.06
Yarn Appearance:																	
22s (27 tex).....index	+.07	+.02	-.11	-.20		+.74	-.63	-.70	+.10	-.12	+.05	+.03	-.34	+.18	-.36	+.31	+.37
50s (12 tex).....index	+.11	+.08	-.13	-.14	+.74		-.56	-.62	+.09	-.09	+.06	-.02	-.28	+.11	-.24	+.22	+.26
Yarn imperfections:																	
22s (27 tex).....No.	-.19	-.18	+.12	+.13	-.63	-.56		+.91	-.23	+.09	-.18	+.05	+.29	-.08	+.29	-.32	-.35
50s (12 tex).....No.	-.24	-.22	+.11	+.15	-.70	-.62	+.91		-.21	+.08	-.16	+.02	+.34	-.11	+.37	-.33	-.39
Color - 22s gray yarn:																	
Reflectance.....Rd	+.36	+.32	+.24	+.30	+.10	+.09	-.23	-.21		-.12	+.87	+.13	-.32	+.23	-.10	+.19	+.15
Yellowness.....+b	+.07	+.07	-.17	-.09	-.12	-.09	+.09	+.08	-.12		+.33	-.23	+.16	-.28	-.19	+.23	+.23
Composite.....index	+.37	+.32	+.14	+.24	+.05	+.06	-.18	-.16	+.87	+.33		.00	-.24	+.12	-.19	+.26	+.26
Color-22s bleached yarn:																	
Reflectance.....Rd	+.02	-.01	+.25	+.16	+.03	-.02	+.05	+.02	+.13	-.23	.00		-.09	+.87	-.12	+.13	+.09
Yellowness.....+b	-.05	-.03	+.04	+.06	-.34	-.28	+.29	+.34	-.32	+.16	-.24	-.09		-.48	+.22	-.29	-.30
Composite.....index	+.04	-.01	+.21	+.11	+.18	+.11	-.08	-.11	+.23	-.28	+.12	+.87	-.48		-.23	+.20	+.23
Color - 22s dyed yarn:																	
Reflectance.....Rd	-.28	-.24	-.10	-.07	-.36	-.24	+.29	+.37	-.10	-.19	-.19	-.12	+.22	-.23		-.55	-.82
Blueness.....-b	-.03	-.07	-.03	-.12	+.31	+.22	-.32	-.33	+.19	+.23	+.26	+.13	-.29	+.20	-.55		+.93
Composite.....index	+.10	+.06	+.02	-.06	+.37	+.26	-.35	-.39	+.15	+.23	+.26	+.09	-.30	+.23	-.82	+.93	

Table 11.--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on 35 long staple samples, collected at triweekly intervals from selected gin points, crop of 1974

Item	Grade	Staple	Fiber length		Micro-naire	Fiber strength		Elon-gation 1/8"	Shirley Analyzer		Color of raw stock			Picker & card waste	Spinning Potential
			2.5% span	50/2.5 unif.		Zero gage	1/8" gage		Visible waste	Total waste	Gray-ness	Yellow-ness	Com-posite		
Sample Distribution:	Index	32d in.	In.	Pct.	Rdg.	Mpsi	G/tex	Pct.	Pct.	Pct.	No.	No.	Index	Pct.	No.
Mean	92.2	35.8	1.15	43.8	3.9	86.9	24.4	6.37	2.42	3.46	1.9	2.6	98.2	8.2	75.2
Standard deviation (±)	3.5	.9	.02	1.5	.4	5.9	2.2	.67	.90	1.03	.7	.6	2.8	1.1	12.7
Correlation Coef. for:															
Classification:															
Grade.....index		+.52	+.24	+.36	+.13	+.37	+.20	-.30	-.80	-.78	-.41	-.25	+.46	-.71	+.26
Staple.....32d inches	+.52		+.35	+.56	-.34	+.69	+.55	-.58	-.66	-.61	-.23	-.46	+.23	-.69	+.70
Fiber length:															
2.5% span.....inches	+.24	+.35		+.51	-.01	+.50	+.48	-.20	-.27	-.29	+.05	-.27	+.06	-.32	+.53
50/2.5 unif.....pct	+.36	+.56	+.51		+.14	+.51	+.46	-.39	-.44	-.48	-.11	-.26	+.07	-.41	+.49
Micronaire.....reading	+.13	+.34	-.01	+.14		-.26	-.46	+.12	+.04	-.08	+.47	+.41	-.46	+.15	-.55
Fiber strength:															
Zero gage.....Mpsi	+.37	+.69	+.50	+.51	-.26		+.75	-.71	-.55	-.49	-.23	-.53	+.11	-.50	+.74
1/8" gage.....grams/tex	+.20	+.55	+.48	+.46	-.46	+.75		-.57	-.50	-.43	-.26	-.58	+.27	-.49	+.80
Elongation (1/8").....pct	-.30	-.58	-.20	-.39	+.12	-.71	-.57		+.44	+.35	+.05	+.53	+.04	+.28	-.41
Shirley Analyzer:															
Visible waste.....pct	-.80	-.66	-.27	-.44	+.04	-.55	-.50	+.44		+.94	+.32	+.37	-.36	+.85	-.54
Total waste.....pct	-.78	-.61	-.29	-.48	-.08	-.49	-.43	+.35	+.94		+.23	+.20	-.32	+.85	-.46
Color of raw stock:															
Grayness.....No.	-.41	-.23	+.05	-.11	+.47	-.23	-.26	+.05	+.32	+.23		+.31	-.88	+.24	-.31
Yellowness.....No.	-.25	-.46	-.27	-.26	+.41	-.53	-.58	+.53	+.37	+.20	+.31		-.23	+.29	-.49
Composite.....index	+.46	+.23	+.06	+.07	-.46	+.11	+.27	+.04	-.36	-.32	-.88	-.23		-.34	+.31
Picker & card waste.....pct	-.71	-.69	-.32	-.41	+.15	-.50	-.49	+.28	+.85	+.85	+.24	+.29	-.34		-.62
Spinning Potential.....No.	+.26	+.70	+.53	+.49	-.55	+.74	+.80	-.41	-.54	-.46	-.31	-.49	+.31	-.62	
Yarn skein strength:															
22s (27 tex).....pounds	+.32	+.75	+.53	+.49	-.57	+.80	+.80	-.41	-.56	-.50	-.39	-.49	+.37	-.64	+.96
50s (12 tex).....pounds	+.31	+.72	+.54	+.48	-.55	+.79	+.81	-.40	-.57	-.52	-.38	-.50	+.37	-.64	+.97
Yarn elongation:															
22s (27 tex).....pct	-.15	+.03	+.20	-.21	-.62	-.12	+.11	+.38	+.12	+.16	-.34	.00	+.42	+.01	+.28
50s (12 tex).....pct	-.09	+.21	+.38	.00	-.67	+.23	+.48	+.15	-.07	-.02	-.37	-.19	+.48	-.24	+.64
Yarn Appearance:															
22s (27 tex).....index	+.10	-.19	-.19	-.03	+.34	-.36	-.38	+.04	+.19	+.14	+.01	+.26	-.01	+.20	-.35
50s (12 tex).....index	+.10	+.11	+.04	+.22	+.26	+.04	-.12	-.22	+.04	+.02	.00	+.08	-.03	+.03	-.07
Yarn imperfections:															
22s (27 tex).....No.	-.30	-.11	-.31	-.25	-.31	-.03	+.16	-.07	+.17	+.19	+.06	-.14	-.08	+.17	-.08
50s (12 tex).....No.	-.31	-.06	-.38	-.20	-.29	-.13	+.04	.00	+.25	+.24	+.05	-.08	-.02	+.15	-.09
Color - 22s gray yarn:															
Reflectance.....Rd	+.19	-.15	+.09	-.14	-.26	-.13	+.09	+.16	-.12	-.13	-.56	-.21	+.68	-.04	+.01
Yellowness.....+b	-.16	-.36	-.10	-.10	+.22	-.41	-.33	+.64	+.26	+.08	+.03	+.71	+.05	+.05	-.19
Composite.....index	+.06	-.32	.00	-.19	-.10	-.32	-.11	+.48	+.06	-.05	-.44	+.25	+.57	.00	-.09
Color - 22s bleached yarn:															
Reflectance.....Rd	+.03	+.09	-.08	-.09	-.30	-.14	+.11	+.02	-.04	+.08	-.02	-.01	+.08	-.03	+.13
Yellowness.....+b	-.39	-.28	-.18	-.14	-.01	-.38	-.03	+.44	+.28	+.25	+.20	+.20	-.15	+.19	-.05
Composite.....index	+.20	+.20	-.02	-.03	-.27	+.03	+.10	-.15	-.16	-.05	-.11	-.08	+.14	-.12	+.15
Color - 22s dyed yarn:															
Reflectance.....Rd	+.09	+.15	+.08	+.04	-.26	+.51	+.38	-.61	-.21	-.13	-.13	-.40	+.06	-.05	+.32
Blueness.....-b	-.18	-.38	-.01	-.02	+.58	-.62	-.43	+.46	+.28	+.17	+.45	+.57	-.26	+.21	-.51
Composite.....index	-.15	-.32	-.04	-.02	+.50	-.64	-.45	+.57	+.26	+.15	+.35	+.55	-.19	+.16	-.48

Table 11.--Continued

Item	Yarn strength		Yarn elongation		Yarn appearance		Yarn imprfctns		Color - 22s gray yarn			Color-22s bleached yarn			Color - 22s dyed yarn		
	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Yellow-ness	Com-posite	Reflect-ance	Blue-ness	Com-posite
	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	Rd.	+b	Index	Rd	+b	Index	Rd	-b	Index
Sample Distribution:																	
Mean.....	113.8	38.9	6.1	4.6	100.6	76.6	20.0	15.4	68.5	10.5	91.3	84.4	3.2	102.8	27.4	25.7	101.9
Standard deviation (±)..	13.0	6.3	.4	.3	9.7	7.6	5.6	4.6	1.2	.5	3.1	1.2	.3	3.1	.9	.7	4.4
Correlation Coef. for:																	
Classification:																	
Grade.....index	+.32	+.31	-.15	-.09	+.10	+.10	-.30	-.31	+.19	-.16	+.06	+.03	-.39	+.20	+.09	-.18	-.15
Staple.....32d inches	+.75	+.72	+.03	+.21	-.19	+.11	-.11	-.06	-.15	-.36	-.32	+.09	-.28	+.20	+.15	-.38	-.32
Fiber length:																	
2.5% span.....inches	+.53	+.54	+.20	+.38	-.19	+.04	-.31	-.38	+.09	-.10	.00	-.08	-.18	-.02	+.08	-.01	-.04
50/2.5 unif.....pct	+.49	+.48	-.21	.00	-.03	+.22	-.25	-.20	-.14	-.10	-.19	-.09	-.14	-.03	+.04	-.02	-.02
Micronaire.....reading	-.57	-.55	-.62	-.67	+.34	+.26	-.31	-.29	-.26	+.22	-.10	-.30	-.01	-.27	-.26	+.58	+.50
Fiber strength:																	
Zero gage.....Mpsi	+.80	+.79	-.12	+.23	-.36	+.04	-.03	-.13	-.13	-.41	-.32	-.14	-.38	+.03	+.51	-.62	-.64
1/8" gage.....grams/tex	+.80	+.81	+.11	+.48	-.38	-.12	+.16	+.04	+.09	-.33	-.11	+.11	-.03	+.10	+.38	-.43	-.45
Elongation (1/8")...pct	-.41	-.40	+.38	+.15	+.04	-.22	-.07	.00	+.16	+.64	+.48	+.02	+.44	-.15	-.61	+.46	+.57
Shirley Analyzer:																	
Visible waste.....pct	-.56	-.57	+.12	-.07	+.19	+.04	+.17	+.25	-.12	+.26	+.06	-.04	+.28	-.16	-.21	+.28	+.26
Total waste.....pct	-.50	-.52	+.16	-.02	+.14	+.02	+.19	+.24	-.13	+.08	-.05	+.08	+.25	-.05	-.13	+.17	+.15
Color of raw stock:																	
Grayness.....No.	-.39	-.38	-.34	-.37	+.01	.00	+.06	+.05	-.56	+.03	-.44	-.02	+.20	-.11	-.13	+.45	+.35
Yellowness.....No.	-.49	-.50	.00	-.19	+.26	+.08	-.14	-.08	-.21	+.71	+.25	-.01	+.20	-.08	-.40	+.57	+.55
Composite.....index	+.37	+.37	+.42	+.48	-.01	-.03	-.08	-.02	+.68	+.05	+.57	+.08	-.15	+.14	+.06	-.26	-.19
Picker & card waste..pct	-.64	-.64	+.01	-.24	+.20	+.03	+.17	+.15	-.04	+.05	.00	-.03	+.19	-.12	-.05	+.21	+.16
Spinning Potential...No.	+.96	+.97	+.28	+.64	-.35	-.07	-.08	-.09	+.01	-.19	-.09	+.13	-.05	+.15	+.32	-.51	-.48
Yarn skein strength:																	
22s (27 tex).....pounds		+.99	+.30	+.64	-.40	-.11	-.07	-.09	+.02	-.18	-.07	+.09	-.11	+.13	+.31	-.55	-.50
50s (12 tex).....pounds	+.99		+.29	+.66	-.44	-.17	-.02	-.04	+.08	-.17	-.03	+.07	-.12	+.13	+.30	-.54	-.48
Yarn elongation:																	
22s (27 tex).....pct	+.30	+.29		+.81	-.10	-.19	+.03	+.02	+.33	+.13	+.33	+.21	+.19	+.11	-.13	-.12	-.03
50s (12 tex).....pct	+.64	+.66	+.81		-.34	-.30	+.12	+.11	+.33	+.12	+.33	+.15	+.12	+.10	-.01	-.20	-.14
Yarn Appearance:																	
22s (27 tex).....index	-.40	-.44	-.10	-.34		+.70	-.60	-.52	.00	+.08	+.05	+.06	+.01	+.03	-.08	+.24	+.19
50s (12 tex).....index	-.11	-.17	-.19	-.30	+.70		-.59	-.51	-.14	-.01	-.12	.00	-.09	+.02	+.02	+.05	+.02
Yarn imperfections:																	
22s (27 tex).....No.	-.07	-.02	+.03	+.12	-.60	-.59		+.87	+.12	-.13	+.03	+.01	+.01	.00	+.12	-.09	-.11
50s (12 tex).....No.	-.09	-.04	+.02	+.11	-.52	-.51	+.87		+.10	+.05	+.11	+.01	+.09	-.02	-.04	.00	+.02
Color - 22s gray yarn:																	
Reflectance.....Rd	+.02	+.08	+.33	+.33	.00	-.14	+.12	+.10		+.08	+.81	-.01	-.22	+.08	-.01	-.05	-.02
Yellowness.....+b	-.18	-.17	+.13	+.12	+.08	-.01	-.13	+.05	+.08		+.63	-.05	+.38	-.17	-.53	+.42	+.51
Composite.....index	-.07	-.03	+.33	+.33	+.05	-.12	+.03	+.11	+.81	+.63		-.03	+.03	-.02	-.31	+.17	+.26
Color-22s bleached yarn:																	
Reflectance.....Rd	+.09	+.07	+.21	+.15	+.06	.00	+.01	+.01	-.01	-.05	-.03		+.01	+.91	-.07	+.07	+.08
Yellowness.....+b	-.11	-.12	+.19	+.12	+.01	-.09	+.01	+.09	-.22	+.38	+.03	+.01		-.40	-.28	+.12	+.20
Composite.....index	+.13	+.13	+.11	+.10	+.03	+.02	.00	-.02	+.08	-.17	-.02	+.91	-.40		+.04	+.01	-.01
Color - 22s dyed yarn:																	
Reflectance.....Rd	+.31	+.30	-.13	-.01	-.08	+.02	+.12	-.04	-.01	-.53	-.31	-.07	-.28	+.04		-.62	-.85
Blueness.....-b	-.55	-.54	-.12	-.20	+.24	+.05	-.09	.00	-.05	+.42	+.17	-.07	+.12	+.01	-.62		+.94
Composite.....index	-.50	-.48	-.03	-.14	+.19	+.02	-.11	+.02	-.02	+.51	+.26	+.08	+.20	-.01	-.85	+.94	

Table 11a--Cotton: Results of simple correlation analyses for the fiber and processing tests performed on combed yarns from 35 long staple samples from selected gin points, crop of 1974

Statistical Items	Picker & Card Waste	Comber waste	Combed Yarn Values							
			Yarn strength		Yarn elongation		Yarn appearance		Yarn imperfections	
			22s	50s	22s	50s	22s	50s	22s	50s
	Pct.	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Sample Distribution:										
Mean	8.21	16.55	132.9	47.4	6.7	5.1	110.9	92.3	8.9	6.9
Standard deviation (±)	1.07	1.85	13.3	5.7	.4	.3	9.2	7.7	3.0	2.6
Correlation Coeff. for										
Classification:										
Grade.....index	-.71	-.16	+.35	+.37	-.25	-.13	+.04	+.10	-.19	-.22
Staple.....32d inches	-.69	-.50	+.74	+.76	-.17	+.02	-.16	-.19	.00	-.07
Fiber length:										
2.5% span.....inches	-.32	-.53	+.52	+.54	-.10	+.15	+.12	+.11	-.09	-.18
50/2.5 unif.....pct	-.41	-.41	+.49	+.53	-.48	-.12	+.14	+.18	-.12	-.16
Micronaire.....reading	+.15	+.27	-.55	-.49	-.66	-.62	+.42	+.46	-.46	-.35
Fiber strength:										
Zero gage.....Mpsi	-.50	-.51	+.85	+.87	-.26	-.07	-.14	-.05	+.06	+.02
1/8" gage.....grams/tex	-.49	-.67	+.81	+.81	-.03	+.26	-.28	-.22	+.28	+.24
Elongation (1/8").....pct	+.28	+.34	-.46	-.47	+.36	+.36	+.16	-.03	-.14	-.09
Shirley Analyzer:										
Visible waste.....pct	+.85	+.41	-.59	-.61	+.22	+.04	+.27	+.06	+.09	+.02
Total waste.....pct	+.85	+.33	-.52	-.55	+.31	+.07	+.22	+.04	+.10	-.01
Color or raw stock:										
Grayness.....No.	+.24	+.10	-.38	-.37	-.32	-.34	+.01	+.04	-.02	+.01
Yellowness.....No.	+.29	+.40	-.51	-.51	+.07	-.08	+.19	+.15	-.23	-.04
Composite.....index	-.34	-.15	+.35	+.33	+.42	+.53	-.01	-.04	+.06	+.01
Picker & card waste....pct		+.44	-.63	-.64	+.10	-.14	+.24	+.19	+.07	+.02
Comber waste..... pct	+.44		-.61	-.63	-.06	-.32	+.06	+.14	+.02	+.08
Combed yarn strength:										
22s (27 tex).....pounds	-.63	-.61		+.99	+.07	+.33	-.23	-.22	+.14	+.08
50s (12 tex).....pounds	-.64	-.63	+.99		+.02	+.30	-.23	-.20	+.13	+.06
Combed yarn elongation:										
22s (27 tex).....pct	+.10	-.06	+.07	+.02		+.80	-.18	-.39	+.35	+.26
50s (12 tex).....pct	-.14	-.32	+.33	+.30	+.80		-.13	-.38	+.30	+.23
Combed yarn appearance:										
22s (27 tex).....index	+.24	+.06	-.23	-.23	-.18	-.13		+.64	-.59	-.68
50s (12 tex).....index	+.19	+.14	-.22	-.20	-.39	-.38	+.64		-.65	-.65
Combed yarn imperfections:										
22s (27 tex).....No.	+.07	+.02	+.14	+.13	+.35	+.30	-.59	-.65		+.87
50s (12 tex).....No.	+.02	+.08	+.08	+.06	+.26	+.23	-.68	-.65	+.87	

Table 12.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 57 short staple samples, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable	7.3	297	90	7.2	6.3	113	91	44	27	40	89	97	98
Grade index	88	88	88	88	88	88	88	88	88	88	88	88	88
Staple length	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9
Micronaire	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Fiber strength (0 gage)	83	83	83	83	83	83	83	83	83	83	83	83	83
Uniformity ratio	44	44	44	44	44	44	44	44	44	44	44	44	44
Standard Deviations (±) for:													
Dependent variable	.91	26.1	10.2	.88	.80	13.5	14.4	21.1	12.8	6.5	6.1	4.5	4.4
Grade index	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Staple length	.97	.97	.97	.97	.97	.97	.97	.97	.97	.97	.97	.97	.97
Micronaire	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69
Fiber strength (0 gage)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Uniformity ratio	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Simple Correlation Coef. for:													
Grade index	-.62	+.24	+.27	+.16	+.07	+.34	+.45	-.51	-.44	+.21	+.24	+.10	+.50
Staple length	-.22	+.64	+.69	+.51	+.55	-.08	-.02	+.14	+.19	+.74	+.24	+.03	+.33
Micronaire	-.36	-.49	-.37	-.61	-.58	+.60	+.58	-.67	-.64	-.30	-.54	+.04	+.19
Fiber strength (0 gage)	-.22	-.27	-.12	-.51	-.55	+.58	+.38	-.61	-.53	-.14	-.24	+.05	-.07
Uniformity ratio	-.04	+.02	+.06	-.04	-.05	+.40	+.41	-.43	-.47	+.10	-.05	+.16	+.37
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.	.62	.65	.69	.51	.56	.38	.48	.59	.55	.74	.30	.10	.53
Partial Cor. Coef. for:													
Grade index	-.59	+.07	+.10	+.01	-.11	+.38	+.48	-.58	-.52	-.01	+.19	+.10	+.44
Staple length	-.05	+.62	+.66	+.50	+.55	-.19	-.17	+.34	+.37	+.72	+.18	.00	+.22
Beta Coefficients for:													
Grade index	-.60	+.05*	+.08*	+.01*	-.09*	+.39*	+.50	-.60	-.54	-.01*	+.19*	+.10*	+.44
Staple length	-.04*	+.63	+.66	+.51	+.58	-.19*	-.16*	+.31*	+.34*	+.74	+.18*	.00*	+.20*
Regression Equation:													
Constant (a)	+17.75	-246.18	-136.60	-7.13	-7.04	+106.47	+44.79	+44.90	+1.29	-111.65	+34.28	+89.34	+38.42
Regression Coef. for:													
Grade index	-.10	+.26	+.15	.00	-.01	+1.00	+1.37	-2.38	-1.31	-.01	+.22	+.09	+.36
Staple length	-.04	+16.87	+6.93	+.46	+.47	-2.64	-2.41	+6.74	+4.54	+4.95	+1.16	+.02	+.90
Standard error (±)	.72	19.87	7.35	.75	.66	12.46	12.65	17.10	10.75	4.40	5.82	4.49	3.71
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.65	.84	.81	.82	.81	.64	.67	.79	.76	.81	.68	.10	.54
Partial Cor. Coef. for:													
Grade index	-.55	+.34	+.29	+.30	+.12	+.28	+.41	-.55	-.48	+.14	+.42	+.09	+.41
Staple length	-.07	+.72	+.72	+.62	+.66	-.19	-.17	+.39	+.41	+.76	+.18	.00	+.22
Micronaire	-.27	-.70	-.57	-.75	-.71	+.56	+.53	-.66	-.63	-.48	-.64	+.01	+.09
Beta Coefficients for:													
Grade index	-.54	+.21*	+.20*	+.20*	+.08*	+.24*	+.37	-.44	-.38	+.09*	+.37	+.10*	+.42
Staple length	-.06*	+.59	+.64	+.47	+.54	-.15*	-.13*	+.27	+.31	+.72	+.14*	.00*	+.20*
Micronaire	-.22*	-.56	-.43	-.67	-.61	+.54	+.48	-.55	-.55	-.34	-.64	+.01*	+.08*
Regression Equation:													
Constant (a)	+18.34	-203.53	-123.76	-5.42	-5.60	+85.21	+24.47	+79.19	+21.85	-105.20	+45.67	+89.14	+37.42
Regression Coef. for:													
Grade index	-.09	+1.04	+.38	+.03	+.01	+.61	+1.00	-1.76	-.93	+.11	+.43	+.08	+.35
Staple length	-.06	+15.88	+6.64	+.42	+.44	-2.15	-1.94	+5.94	+4.06	+4.80	+.89	+.02	+.92
Micronaire	-.29	-21.01	-6.32	-.85	-.71	+10.47	+10.01	-16.89	-10.13	-3.18	-5.61	+.09	+.50
Standard Error (±)	.69	14.10	6.02	.50	.47	10.33	10.75	12.87	8.36	3.85	4.47	4.49	3.70

*Statistically insignificant

Table 12.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Multiple Cor. Coef.....	.65	.84	.81	.85	.86	.71	.67	.84	.78	.81	.68	.11	.58
Partial Coef. for:													
Grade index.....	-.55	+.33	+.20	+.38	+.20	+.25	+.41	-.59	-.49	+.11	+.36	+.07	+.47
Staple length.....	-.07	+.72	+.72	+.64	+.70	-.19	-.16	+.42	+.42	+.76	+.18	+.01	+.22
Micronaire.....	-.24	-.64	-.56	-.64	-.58	+.39	+.45	-.51	-.50	-.45	-.59	.00	+.21
Fiber str. (0 gage).....	+.01	-.04	+.14	-.41	-.49	+.38	+.07	-.45	-.30	+.05	+.03	+.03	-.27
Beta Coefficients for:													
Grade index.....	-.54	+.22	+.15*	+.24*	+.12*	+.20*	+.36	-.43	-.38	+.08*	+.36*	+.09*	+.51
Staple length.....	-.06*	+.59	+.64	+.46	+.52	-.14*	-.13*	+.26	+.30	+.72	+.14*	+.01*	+.19*
Micronaire.....	-.23*	-.55	-.48	-.53	-.44	+.35	+.45	-.39	-.43	-.36	-.65	.00*	+.21*
Fiber str. (0 gage).....	+.01*	-.02*	+.10*	-.28	-.34	+.35*	+.06*	-.32	-.23*	+.04*	+.03*	+.03*	-.27*
Regression Equation:													
Constant (a).....	+18.18	-196.65	-133.09	-1.83	-1.48	+13.02	+9.16	+194.64	+71.54	-107.70	+44.19	+87.58	+56.08
Regression Coef. for:													
Grade index.....	-.09	+1.09	+.28	+.04	+.02	+.52	+.99	-1.74	-.92	+.09	+.41	+.07	+.42
Staple length.....	-.06	+15.86	+6.67	+.41	+.43	-1.98	-1.91	+5.71	+3.96	+4.81	+.90	+.03	+.88
Micronaire.....	-.30	-20.53	-7.08	-.67	-.51	+7.00	+9.32	-11.84	-7.96	-3.35	-5.74	-.01	+1.36
Fiber str. (0 gage)....	.00	-.15	+.24	-.06	-.06	+1.08	+.21	-1.57	-.67	+.05	+.04	+.03	-.27
Standard Error (±).....	.69	14.09	5.96	.46	.41	9.53	10.72	11.50	7.99	3.85	4.46	4.49	3.56
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.67	.88	.85	.88	.88	.74	.70	.86	.82	.85	.70	.19	.65
Partial Cor. Coef. for:													
Grade index.....	-.56	+.32	+.17	+.38	+.19	+.24	+.40	-.60	-.50	+.07	+.35	+.06	+.47
Staple length.....	-.06	+.77	+.77	+.68	+.73	-.17	-.15	+.42	+.42	+.80	+.21	+.02	+.27
Micronaire.....	-.28	-.73	-.66	-.70	-.65	+.29	+.36	-.42	-.40	-.58	-.62	-.06	+.08
Fiber str. (0 gage).....	+.03	+.01	+.21	-.40	-.48	+.42	+.10	-.50	-.35	+.11	+.06	+.04	-.25
Uniformity ratio.....	+.17	+.45	+.44	+.37	+.36	+.30	+.27	-.36	-.37	+.46	+.22	+.16	+.36
Beta Coefficients for:													
Grade index.....	-.56	+.19*	+.11*	+.22*	+.10*	+.18*	+.35	-.42	-.36	+.04*	+.33*	+.07*	+.47
Staple length.....	-.05*	+.61	+.66	+.48	+.54	-.12*	-.11*	+.25	+.28	+.74	+.16*	+.02*	+.22*
Micronaire.....	-.28*	-.66	-.60	-.61	-.52	+.27*	+.36*	-.30	-.32	-.48	-.72	-.07*	+.08*
Fiber str. (0 gage).....	+.03*	+.01*	+.13*	-.25	-.31	+.37	+.09*	-.35	-.26*	+.07*	+.05*	+.05*	-.23*
Uniformity ratio.....	+.14*	+.27	+.28	+.21*	+.20*	+.23*	+.22*	-.21*	-.25*	+.30	+.18*	+.17*	+.32*
Regression Equation:													
Constant (a).....	+14.12	-421.06	-224.63	-7.87	-6.76	-87.80	-93.95	+342.78	+178.82	-170.43	+9.77	+63.07	+5.37
Regression Coef. for:													
Grade index.....	-.10	+.94	+.22	+.04	+.02	+.47	+.94	-1.68	-.88	+.05	+.39	+.06	+.39
Staple length.....	-.04	+16.44	+6.91	+.43	+.44	-1.73	-1.65	+5.33	+3.69	+4.97	+.99	+.09	+1.00
Micronaire.....	-.37	-24.68	-8.79	-.78	-.61	+5.17	+7.44	-9.16	-6.02	-4.51	-6.38	-.46	+.52
Fiber str. (0 gage)....	+.01	+.03	+.31	-.05	-.06	+1.16	+.30	-1.68	-.76	+.10	+.07	+.05	-.23
Uniformity ratio.....	+.09	+5.04	+2.07	+.13	+.12	+2.23	+2.28	-3.25	-2.36	+1.41	+.78	+.55	+1.02
Standard Error (±).....	.68	12.55	5.35	.42	.38	9.11	10.32	10.73	7.41	3.41	4.35	4.44	3.32

*Statistically insignificant

Table 13.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 57 short staple samples, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	7.3	297	90	7.2	6.3	113	91	44	27	40	89	97	98
Grayness	3	3	3	3	3	3	3	3	3	3	3	3	3
Yellowness	4	4	4	4	4	4	4	4	4	4	4	4	4
Nonlint content (S.A.)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
2.5% span length	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96
Micronaire	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Standard Deviation (±) for:													
Dependent variable	.91	26.1	10.2	.88	.80	13.5	14.4	21.1	12.8	6.5	6.1	4.5	4.4
Grayness	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Yellowness	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
Nonlint content (S.A.)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
2.5% span length	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Micronaire	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69
Simple Correlation Coef. for:													
Grayness	+.11	-.70	-.63	-.71	-.64	+.12	+.08	-.18	-.24	-.53	-.75	-.27	-.45
Yellowness	+.07	+.22	+.23	+.16	+.09	-.10	-.08	+.04	+.11	+.18	+.12	.00	+.10
Nonlint content (S.A.)	+.71	+.36	+.30	+.45	+.45	-.50	-.53	+.65	+.64	+.28	+.33	-.04	-.21
2.5% span length	-.33	+.57	+.61	+.42	+.49	-.10	+.20	+.05	+.06	+.67	+.20	-.08	+.28
Micronaire	-.36	-.49	-.37	-.61	-.58	+.60	+.57	-.67	-.64	-.30	-.54	+.04	+.19
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS													
Multiple Cor. Coef.	.14	.70	.64	.71	.64	.14	.10	.18	.24	.53	.75	.28	.45
Partial Cor. Coef. for:													
Grayness	+.12	-.68	-.61	-.71	-.64	+.10	+.07	-.18	-.22	-.51	-.74	-.28	-.44
Yellowness	+.10	+.11	+.13	+.02	-.05	-.08	-.07	+.01	+.07	+.09	-.05	-.06	+.01
Beta Coefficients for:													
Grayness	+.13*	-.68	-.61	-.71	-.65	+.10*	+.07*	-.18*	-.22*	-.51	-.75	-.28*	-.45
Yellowness	+.10*	+.08*	+.11*	+.01*	-.04*	-.08*	-.07*	+.01*	+.07*	+.08*	-.03*	-.05*	+.01*
Regression Equation:													
Constant (a)	+6.30	+324.81	+97.22	+8.70	+7.84	+117.60	+95.66	+51.96	+27.49	+44.62	+102.06	+102.51	+102.66
Regression Coef. for:													
Grayness	+.09	-13.89	-4.83	-.49	-.41	+1.11	+.76	-2.99	-2.24	-2.61	-3.61	-1.01	-1.54
Yellowness	+.18	+4.46	+2.22	+.03	-.07	-2.23	-1.98	+.34	+1.74	+1.06	-.39	-.51	+.07
Standard Error (±)	.91	18.58	7.83	.61	.61	13.35	14.35	20.75	12.45	5.50	4.06	4.34	3.92
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.)													
Multiple Cor. Coef.	.75	.75	.67	.79	.73	.51	.53	.65	.66	.57	.78	.29	.53
Partial Cor. Coef. for:													
Grayness	+.33	-.68	-.60	-.72	-.64	+.03	-.01	-.11	-.16	-.49	-.74	-.29	-.49
Yellowness	+.14	+.12	+.14	+.02	-.06	-.09	-.08	+.01	+.08	+.09	-.05	-.06	+.01
Nonlint (S.A.)	+.74	+.36	+.27	+.50	+.46	-.49	-.53	+.64	+.63	+.24	+.33	-.08	-.31
Beta Coefficients for:													
Grayness	+.24*	-.64	-.58	-.66	-.59	+.03*	-.01*	-.09*	-.13*	-.48	-.72	-.30*	-.49
Yellowness	+.10*	+.08*	+.11*	+.01*	-.04*	-.08*	-.07*	+.01*	+.06*	+.08*	-.03*	-.05*	+.01*
Nonlint (S.A.)	+.74	+.26*	+.21*	+.35	+.36	-.49	-.53	+.63	+.62	+.20*	+.22*	-.08*	-.28*
Regression Equation:													
Constant (a)	+3.68	+298.46	+88.98	+7.51	+6.74	+143.13	+124.98	+.52	-2.94	+39.56	+96.90	+103.88	+107.45
Regression Coef. for:													
Grayness	+.17	-13.09	-4.58	-.45	-.37	+.33	-.14	-1.42	-1.31	-2.46	-3.45	-1.05	-1.69
Yellowness	+.18	+4.43	+2.22	+.02	-.07	-2.20	-1.94	+.28	+1.70	+1.06	-.40	-.51	+.08
Nonlint (S.A.)	+.60	+6.05	+1.89	+.27	+.25	-5.87	-6.74	+11.82	+6.99	+1.16	+1.18	-.31	-1.10
Standard Error (±)	.61	17.31	7.53	.53	.55	11.63	12.21	15.98	9.68	5.35	3.83	4.32	3.72

*Statistically insignificant

Table 13.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH													
Multiple Cor. Coef.....	.78	.87	.84	.85	.83	.52	.56	.66	.66	.82	.78	.33	.55
Partial Cor. Coef. for:													
Grayness.....	+.21	-.64	-.58	-.62	-.54	.00	+.03	-.08	-.14	-.47	-.72	-.31	-.46
Yellowness.....	+.16	+.14	+.17	+.01	-.09	-.09	-.08	+.01	+.08	+.11	-.05	-.05	+.01
Nonlint (S.A.).....	+.75	+.53	+.44	+.58	+.58	-.51	-.51	+.64	+.63	+.43	+.33	-.10	-.30
2.5% span length.....	-.34	+.67	+.68	+.49	+.58	-.16	+.19	+.11	+.10	+.71	+.08	-.17	+.17
Beta Coefficients for:													
Grayness.....	+.15*	-.46	-.42	-.49	-.41	.00*	+.03*	-.06*	-.11*	-.33	-.70	-.33*	-.46
Yellowness.....	+.10*	+.07*	+.09*	+.01*	-.05*	-.08*	-.07*	.00*	+.06*	+.06*	-.03*	-.05*	+.01*
Nonlint (S.A.).....	+.71	+.32	+.27	+.39	+.41	-.51	-.51	+.64	+.63	+.28	+.23*	-.10*	-.27*
2.5% span length.....	-.23*	+.46	+.52	+.31	+.41	-.14*	+.17*	+.09*	+.08*	+.61	+.05*	-.16*	+.15*
Regression Equation:													
Constant (a).....	+9.35	-19.48	-50.43	+.23	-1.98	+192.15	+62.15	-48.95	-28.97	-63.93	+88.83	+123.21	+90.24
Regression Coef. for:													
Grayness.....	+.11	-9.31	-3.36	-.34	-.26	+.01	+.34	-1.06	-1.12	-1.68	-3.38	-1.17	-1.58
Yellowness.....	+.19	+3.86	+1.96	+.01	-.08	-2.11	-2.06	+.19	+1.65	+.87	-.41	-.47	+.05
Nonlint (S.A.).....	+.58	+7.34	+2.46	+.30	+.29	-6.07	-6.48	+12.02	+7.10	+1.59	+1.22	-.39	-1.03
2.5% span length.....	-5.61	+314.10	+139.13	+7.11	+8.58	-49.28	+62.93	+49.61	+26.08	+103.69	+8.03	-19.45	+17.30
Standard Error (±).....	.57	12.88	5.53	.46	.45	11.48	11.99	15.88	9.64	3.75	3.82	4.27	3.66
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.....	.80	.89	.85	.88	.88	.69	.63	.75	.72	.83	.79	.41	.63
Partial Cor. Coef. for:													
Grayness.....	+.03	-.46	-.46	-.43	-.29	-.31	-.16	+.20	+.09	-.33	-.61	-.40	-.57
Yellowness.....	+.20	+.09	+.14	-.06	-.19	-.01	-.03	-.07	+.03	+.08	-.08	-.01	+.07
Nonlint (S.A.).....	+.72	+.19	+.21	+.22	+.17	-.06	-.19	+.29	+.32	+.19	+.10	+.11	+.04
2.5% span length.....	-.41	+.73	+.69	+.61	+.70	-.37	+.06	+.30	+.24	+.72	+.15	-.25	+.03
Micronaire.....	+.28	-.39	-.20	-.44	-.52	+.52	+.35	-.48	-.38	-.21	-.22	+.26	+.37
Beta Coefficients for:													
Grayness.....	+.03*	-.32	-.35	-.31	-.19*	-.29*	-.16*	+.17*	+.08*	-.25*	-.61	-.49	-.66
Yellowness.....	+.13*	+.04*	+.08*	-.03*	-.09*	-.01*	-.03*	-.05*	+.02*	+.05*	-.05*	-.01*	+.05*
Nonlint (S.A.).....	+.89	+.12*	+.16*	+.15*	+.12*	-.06*	-.22*	+.28*	+.34*	+.16*	+.09*	+.15*	+.05*
2.5% span length.....	-.30	+.54	+.57	+.40	+.53	-.32*	+.05*	+.23*	+.19*	+.66	+.10*	-.26*	+.03*
Micronaire.....	+.29*	-.32	-.18*	-.39	-.49	+.75	+.48*	-.60	-.48*	-.20*	-.23*	+.41*	+.52*
Regression Equation:													
Constant (a).....	+9.01	-8.97	-47.99	+.63	-1.51	+178.48	+52.88	-31.97	-20.81	-62.19	+90.64	+120.71	+87.15
Regression Coef. for:													
Grayness.....	+.02	-6.46	-2.77	-.22	-.12	-3.05	-1.82	+2.85	+.79	-1.28	-2.92	-1.73	-2.27
Yellowness.....	+.24	+2.29	+1.61	-.05	-.16	-.23	-.76	-2.18	+.51	+.62	-.67	-.13	+.47
Nonlint (S.A.).....	+.72	+2.87	+1.47	+.12	+.08	-.72	-2.79	+5.30	+3.85	+.90	+.48	+.58	+.18
2.5% span length.....	-7.27	+366.63	+150.73	+9.26	+11.00	-112.06	+19.57	+128.52	+64.19	+111.80	+16.73	-30.91	+3.10
Micronaire.....	+.39	-12.21	-2.70	-.50	-.56	+14.59	+10.08	-18.34	-8.86	-1.88	-2.02	+2.66	+3.30
Standard Error (±).....	.55	11.86	5.42	.42	.38	9.78	11.24	13.96	8.91	3.67	3.73	4.12	3.40

*Statistically insignificant

Table 14.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 57 short staple samples, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable.....	7.3	297	90	7.2	6.3	113	91	44	27	40	89	97	98
2.5% span length.....	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96	.96
Micronaire.....	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
Fiber str. (1/8" gage).....	21	21	21	21	21	21	21	21	21	21	21	21	21
Uniformity ratio.....	44	44	44	44	44	44	44	44	44	44	44	44	44
Elongation (1/8" gage).....	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Standard Deviation (±) for:													
Dependent variable.....	.91	26.1	10.2	.88	.80	13.5	14.4	21.1	12.8	6.5	6.1	4.5	4.4
2.5% span length.....	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Micronaire.....	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69
Fiber str. (1/8" gage).....	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Uniformity ratio.....	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Elongation (1/8" gage).....	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69	.69
Simple Correlation Coef. for:													
2.5% span length.....	-.33	+.57	+.61	+.42	+.49	-.10	+.20	+.05	+.06	+.67	+.20	-.08	+.28
Micronaire.....	-.36	-.49	-.37	-.61	-.58	+.60	+.57	-.67	-.64	-.30	-.54	+.04	+.19
Fiber str. (1/8" gage).....	-.07	+.55	+.64	+.40	+.44	-.01	+.21	+.01	+.03	+.60	+.28	+.06	+.22
Uniformity ratio.....	-.04	+.02	+.06	-.04	-.05	+.40	+.41	-.43	-.47	+.10	-.05	+.16	+.37
Elongation (1/8" gage).....	+.06	+.62	+.53	+.78	+.80	-.53	-.28	+.61	+.56	+.53	+.49	-.08	+.22
Multiple Cor. Data for:													
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE													
Multiple Cor. Coef.....	.45	.83	.79	.81	.84	.64	.58	.69	.67	.80	.62	.10	.32
Partial Cor. Coef. for:													
2.5% span length.....	-.29	+.77	+.75	+.68	+.75	-.27	+.11	+.24	+.23	+.78	+.36	-.09	+.26
Micronaire.....	-.33	-.74	-.62	-.77	-.79	+.63	+.56	-.69	-.67	-.59	-.60	+.06	+.15
Beta Coefficients for:													
2.5% span length.....	-.27*	+.68	+.71	+.55	+.62	-.22*	+.09*	+.18*	+.18*	+.75	+.31*	-.09*	+.26*
Micronaire.....	-.31*	-.62	-.50	-.71	-.70	+.64	+.56	-.70	-.68	-.44	-.59	+.06*	+.14*
Regression Equation:													
Constant (a).....	+15.10	-60.86	-62.99	-1.48	-3.10	+140.23	+12.43	+28.73	+15.71	-67.28	+61.55	+106.21	+66.29
Regression Coef. for:													
2.5% span length.....	-6.49	+463.74	+187.77	+12.62	+12.97	-77.65	+35.20	+100.16	+61.18	+127.96	+49.54	-10.50	+29.33
Micronaire.....	-.42	-23.29	-7.33	-.90	-.81	+12.45	+11.62	-21.30	-12.53	-4.16	-5.24	+.37	+.91
Standard Error (±).....	.82	14.51	6.27	.51	.43	10.41	11.73	15.30	9.57	3.92	4.81	4.50	4.16
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE FIBER STR. (1/8" GAGE)													
Multiple Cor. Coef.....	.51	.86	.84	.83	.86	.64	.59	.69	.67	.82	.65	.19	.32
Partial Cor. Coef. for:													
2.5% span length.....	-.38	+.54	+.48	+.44	+.54	-.25	+.01	+.19	+.17	+.57	+.09	-.18	+.17
Micronaire.....	-.34	-.77	-.68	-.78	-.80	+.63	+.56	-.69	-.66	-.61	-.61	+.05	+.15
Fiber str. (1/8" gage)...	+.27	+.42	+.49	+.29	+.29	+.08	+.10	-.03	.00	+.32	+.27	+.17	+.03
Beta Coefficients for:													
2.5% span length.....	-.50	+.45	+.41	+.38	+.47	-.28*	+.01*	+.20*	+.18*	+.56	+.10*	-.25*	+.23*
Micronaire.....	-.32*	-.63	-.51	-.71	-.70	+.64	+.56	-.70	-.68	-.45	-.60	+.05*	+.14*
Fiber str. (1/8" gage)...	+.34*	+.33	+.43	+.24*	+.21*	+.09*	+.12*	-.03*	.00*	+.27*	+.30*	+.23*	+.04*
Regression Equation:													
Constant (a).....	+16.18	-31.12	-47.89	-.75	-2.50	+144.51	+18.26	+26.51	+15.89	-61.07	+67.95	+109.87	+66.86
Regression Coef. for:													
2.5% span length.....	-12.09	+308.34	+108.86	+8.79	+9.83	-100.00	+4.71	+111.74	+60.24	+95.50	+16.13	-29.60	+26.38
Micronaire.....	-.42	-23.53	-7.45	-.91	-.81	+12.42	+11.57	-21.29	-12.53	-4.21	-5.29	+.34	+.91
Fiber str. (1/8" gage).	+.21	+5.84	+2.96	+.14	+.12	+.84	+1.15	-.44	+.04	+1.22	+1.26	+.72	+.11
Standard Error (±).....	.79	13.18	5.46	.49	.41	10.38	11.67	15.29	9.57	3.71	4.63	4.43	4.16

*Statistically insignificant

Table 14.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s	Coarse 8s	Fine 22s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE FIBER STR. (1/8" GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.51	.88	.85	.85	.87	.66	.62	.72	.72	.85	.66	.21	.47
Partial Cor. Coef. for:													
2.5% span length.....	-.37	+.58	+.51	+.45	+.57	-.30	-.04	+.26	+.26	+.61	+.07	-.20	+.09
Micronaire.....	-.32	-.80	-.70	-.80	-.82	+.56	+.48	-.62	-.59	-.67	-.61	+.01	-.01
Fiber str. (1.8" gage)...	+.25	+.30	+.40	+.18	+.16	-.01	.00	+.08	+.14	+.20	+.21	+.12	-.12
Uniformity ratio.....	.00	+.33	+.26	+.29	+.31	+.23	+.25	-.28	-.35	+.35	+.14	+.10	+.37
Beta Coefficients for:													
2.5% span length.....	-.51*	+.49	+.44	+.38	+.48	-.34*	-.05*	+.27*	+.27*	+.58	+.08*	-.28*	+.12*
Micronaire.....	-.32*	-.70	-.57	-.78	-.77	+.56	+.47	-.61	-.56	-.53	-.64	+.01*	-.01*
Fiber str. (1/8" gage)...	+.33*	+.23*	+.35	+.15*	+.12*	-.01*	.00*	+.08*	+.15*	+.16*	+.24*	+.18*	-.16*
Uniformity ratio.....	.00*	+.20*	+.16*	+.19*	+.19*	+.21*	+.24*	-.23*	-.30*	+.23*	+.12*	+.11*	+.40*
Regression Equation:													
Constant (a).....	+16.14	-170.06	-93.39	-4.55	-6.03	+101.49	-37.88	+102.00	+74.08	-98.78	+54.26	+102.07	+39.16
Regression Coef. for:													
2.5% span length.....	-12.11	+331.88	+117.20	+8.78	+9.95	-120.87	-18.00	+149.88	+91.20	+99.25	+12.81	-33.36	+13.31
Micronaire.....	-.42	-26.25	-8.32	-.99	-.89	+10.93	+9.74	-18.65	-10.47	-5.01	-5.68	+.07	-.04
Fiber str. (1/8" gage).	+.21	+4.13	+2.41	+.09	+.07	-.09	.00	+1.22	+1.33	+.72	+1.01	+.55	-.48
Uniformity ratio.....	.00	+3.71	+1.19	+.12	+.11	+2.01	+2.49	-3.58	-2.81	+1.09	+.54	+.36	-1.29
Standard Error (±).....	.79	12.42	5.27	.47	.39	10.10	11.29	14.69	8.97	3.47	4.58	4.41	3.87
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE FIBER STR. (1/8" GAGE), UNIFORMITY RATIO,ELONGATION (1/8" GAGE)													
Multiple Cor. Coef.....	.51	.88	.85	.89	.92	.70	.63	.78	.76	.85	.67	.22	.52
Partial Cor. Coef. for:													
2.5% span length.....	-.35	+.54	+.49	+.35	+.50	-.23	-.01	+.15	+.17	+.58	+.04	-.17	+.02
Micronaire.....	-.28	-.70	-.61	-.65	-.69	+.34	+.33	-.37	-.35	-.56	-.48	-.03	+.15
Fiber str. (1/8" gage)...	+.25	+.30	+.40	+.18	+.17	+.01	+.01	+.07	+.13	+.19	+.20	+.12	-.13
Uniformity ratio.....	+.01	+.31	+.25	+.24	+.27	+.29	+.27	-.38	-.42	+.34	+.12	+.11	+.34
Elongation (1/8" gage)...	-.04	+.14	+.02	+.53	+.61	-.31	-.12	+.45	+.38	+.06	+.12	-.06	+.24
Beta Coefficients for:													
2.5% span length.....	-.49*	+.45	+.44	+.25*	+.34	-.25*	-.01*	+.15*	+.17*	+.57	+.04*	-.26*	+.03*
Micronaire.....	-.35*	-.64	-.56	-.54	-.51	+.36*	+.38*	-.35*	-.34*	-.50	-.57	-.04*	+.18*
Fiber str. (1/8" gage)...	+.34*	+.23*	+.35	+.13*	+.10*	+.01*	+.01*	+.06*	+.13*	+.16*	+.23*	+.18*	-.18*
Uniformity ratio.....	+.01*	+.18*	+.16*	+.13*	+.13*	+.25*	+.26*	-.30*	-.36	+.22*	+.10*	+.12*	+.36*
Elongation (1/8" gage)...	-.05*	+.09*	+.01*	+.38	+.40	-.31*	-.13*	+.42	+.36*	+.04*	+.12*	-.08*	+.29*
Regression Equation:													
Constant (a).....	+16.14	-165.05	-93.15	-4.05	-5.51	+99.85	-38.85	+105.14	+75.53	-98.25	+54.87	+101.92	+39.68
Regression Coef. for:													
2.5% span length.....	-11.79	+309.54	+116.14	+5.77	+7.01	-87.66	-3.06	+80.99	+55.56	+96.60	+6.81	-30.37	+3.41
Micronaire.....	-.46	-24.13	-8.22	-.69	-.59	+7.03	+8.01	-10.52	-6.23	-4.75	-5.02	-.28	+1.12
Fiber str. (1/8" gage).	+.21	+4.05	+2.41	+.08	+.06	+.06	+.06	+.91	+1.17	+.71	+.98	+.56	-.53
Uniformity ratio.....	+.01	+3.45	+1.18	+.08	+.07	+2.48	+2.70	-4.56	-3.32	+1.06	+.46	+.41	+1.15
Elongation (1/8" gage).	-.06	+3.37	+.16	+.49	+.47	-6.19	-2.74	+12.88	+6.70	+.41	+1.05	-.56	+1.84
Standard Error (±).....	.79	12.30	5.27	.40	.31	9.59	11.21	13.15	8.30	3.47	4.55	4.40	3.76

*Statistically insignificant

Table 15.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 299 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable	6.3	106	36	6.3	4.8	100	79	19	14	63	91	103	103
Grade index	92	92	92	92	92	92	92	92	92	92	92	92	92
Staple length	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
Micronaire	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Fiber strength (0 gage)	85	85	85	85	85	85	85	85	85	85	85	85	85
Uniformity ratio	44	44	44	44	44	44	44	44	44	44	44	44	44
Standard Deviations (±) for:													
Dependent variable	.95	11.4	6.1	.60	.45	12.6	9.7	6.8	5.6	8.7	4.3	3.4	4.6
Grade index	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Staple length	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86	.86
Micronaire	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51
Fiber strength (0 gage)	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Uniformity ratio	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Simple Correlation Coef. for:													
Grade index	-.63	+.42	+.39	+.07	+.14	+.18	+.15	-.41	-.38	+.37	+.53	+.09	+.29
Staple length	-.26	+.55	+.51	+.28	+.26	+.24	+.18	-.22	-.30	+.55	+.11	+.22	+.17
Micronaire	-.17	-.05	-.05	-.48	-.48	+.48	+.49	-.44	-.52	-.10	+.12	.00	+.39
Fiber strength (0 gage)	-.17	+.52	+.49	-.50	-.25	+.10	+.13	-.20	-.20	+.32	+.19	-.09	+.01
Uniformity ratio	-.25	+.46	+.45	-.31	-.16	+.35	+.44	-.38	-.45	+.36	+.20	-.03	+.31
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.	.65	.63	.58	.28	.27	.28	.21	.43	.44	.61	.54	.22	.31
Partial Cor. Coef. for:													
Grade index	-.61	+.37	+.33	.00	+.08	+.14	+.11	-.38	-.34	+.30	+.53	+.04	+.26
Staple length	-.16	+.52	+.47	+.28	+.24	+.21	+.15	-.15	-.24	+.52	-.01	+.20	+.12
Beta Coefficients for:													
Grade index	-.61	+.32	+.29	.00*	+.08*	+.14*	+.11*	-.38	-.33	+.25	+.54	+.04*	+.26
Staple length	-.13*	+.48	+.44	+.28	+.24	+.21	+.15*	-.14*	-.22	+.50	-.01*	+.21	+.11*
Regression Equation:													
Constant (a)	+22.23	-184.63	-108.37	-.61	-.59	-41.22	-1.40	+106.74	+101.92	-154.01	+47.21	+71.07	+58.17
Regression Coef. for:													
Grade index	-.12	+.76	+.38	.00	+.01	+.37	+.23	-.55	-.40	+.47	+.50	+.03	+.25
Staple length	-.14	+6.36	+3.16	+.20	+.13	+3.09	+1.70	-1.08	-1.47	+5.00	-.05	+.82	+.61
Standard Error (±)	.72	8.83	4.99	.57	.43	12.09	9.48	6.15	5.06	6.89	3.66	3.32	4.37
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE													
Multiple Cor. Coef.	.65	.65	.60	.59	.59	.52	.51	.56	.62	.64	.54	.22	.45
Partial Cor. Coef. for:													
Grade index	-.60	+.41	+.36	+.14	+.23	+.04	+.01	-.32	-.27	+.35	+.52	+.05	+.20
Staple length	-.16	+.53	+.48	+.34	+.30	+.22	+.15	-.14	-.25	+.54	-.01	+.21	+.11
Micronaire	-.02	-.22	-.19	-.54	-.55	+.46	+.48	-.39	-.49	-.26	-.01	-.03	+.34
Beta Coefficients for:													
Grade index	-.60	+.35	+.33	+.12*	+.20	+.04*	+.01*	-.30	-.23	+.30	+.54	+.05*	+.19
Staple length	-.12*	+.49	+.45	+.30	+.26	+.20	+.13*	-.12*	-.21	+.50	-.01*	+.21	+.10*
Micronaire	-.02*	-.17	-.16	-.53	-.54	+.47	+.48	-.37	-.45	-.21	-.01*	-.03*	+.34
Regression Equation:													
Constant (a)	+22.29	-179.59	-105.88	+.19	+.02	-55.80	-13.19	+113.07	+108.36	-149.38	+47.28	+71.30	+54.26
Regression Coef. for:													
Grade index	-.12	+.85	+.42	+.02	+.02	+.10	+.02	-.43	-.28	+.55	+.50	+.04	+.18
Staple length	-.14	+6.44	+3.20	+.21	+.14	+2.85	+1.51	-.98	-1.36	+5.07	-.05	+.83	+.54
Micronaire	-.03	-3.93	-1.94	-.63	-.48	+11.35	+9.18	-4.93	-5.01	-3.60	-.05	-.17	+3.05
Standard Error (±)	.72	8.61	4.90	.48	.36	10.72	8.33	5.65	4.42	6.66	3.66	3.32	4.11

*Statistically insignificant

Table 15.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Multiple Cor. Coef.....	.65	.78	.72	.76	.63	.53	.51	.56	.62	.68	.54	.26	.47
Partial Cor. Coef. for:													
Grade index.....	-.59	+.22	+.19	+.28	+.29	+.06	+.01	-.31	-.27	+.24	+.49	+.09	+.24
Staple length.....	-.16	+.57	+.50	+.45	+.33	+.22	+.15	-.14	-.25	+.54	-.01	+.22	+.12
Micronaire.....	-.03	-.37	-.32	-.53	-.52	+.47	+.47	-.39	-.48	-.32	-.02	.00	+.37
Fiber str. (0 gage).....	+.04	+.55	+.50	-.58	-.28	-.08	-.01	.00	+.02	+.29	+.05	-.14	-.17
Beta Coefficients for:													
Grade index.....	-.61	+.16	+.16	+.20	+.26	+.06*	+.01*	-.30	-.24	+.21	+.53	+.10*	+.24
Staple length.....	-.13*	+.45	+.42	+.34	+.28	+.20	+.14*	-.12*	-.21	+.49	-.01*	+.22	+.11*
Micronaire.....	-.02*	-.26	-.24	-.43	-.49	+.47	+.48	-.37	-.45	-.26	-.01*	.00*	+.37
Fiber str. (0 gage).....	+.03*	+.45	+.43	-.50	-.24	-.07*	-.01*	.00*	+.01*	+.24	+.04*	-.15*	-.16*
Regression Equation:													
Constant (a).....	+22.19	-186.39	-110.79	+2.16	+.54	-52.60	-12.77	+113.17	+107.98	-153.40	+46.66	+73.01	+57.12
Regression Coef. for:													
Grade index.....	-.12	+.39	+.20	+.03	+.02	+.16	+.02	-.43	-.28	+.38	+.48	+.07	+.23
Staple length.....	-.14	+5.99	+2.97	+.24	+.14	+2.93	+1.52	-.98	-1.37	+4.89	-.06	+.87	+.61
Micronaire.....	-.05	-5.92	-2.96	-.51	-.43	+11.69	+9.22	-4.92	-5.05	-4.40	-.12	+.02	+3.34
Fiber str. (0 gage)....	.00	+.86	+.44	-.05	-.02	-.15	-.02	.00	+.01	+.35	+.03	-.08	-.13
Standard Error (±).....	.72	7.17	4.25	.39	.35	10.69	8.33	5.65	4.42	6.38	3.66	3.28	4.05
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.65	.83	.78	.76	.65	.53	.54	.56	.63	.74	.54	.27	.49
Partial Cor. Coef. for:													
Grade index.....	-.58	+.23	+.19	+.26	+.28	+.06	-.01	-.31	-.26	+.24	+.49	+.09	+.23
Staple length.....	-.15	+.56	+.48	+.43	+.30	+.21	+.12	-.13	-.23	+.52	-.02	+.22	+.10
Micronaire.....	.00*	-.54	-.49	-.51	-.54	+.38	+.32	-.31	-.38	-.47	-.03	+.04	+.26
Fiber str. (0 gage).....	+.05	+.42	+.35	-.58	-.34	-.10	-.10	+.02	+.06	+.12	+.03	-.10	-.21
Uniformity ratio.....	-.04	+.44	+.42	+.12	+.21	+.06	+.20	-.05	-.10	+.39	+.03	-.06	+.13
Beta Coefficients for:													
Grade index.....	-.61	+.15	+.14	+.19	+.24	+.05*	-.01*	-.29	-.23	+.19	+.52	+.10*	+.22
Staple length.....	-.12*	+.40	+.36	+.33	+.25	+.19	+.10*	-.12*	-.19	+.43	-.02*	+.23	+.09*
Micronaire.....	.00	-.46	-.44	-.49	-.60	+.43	+.36	-.34	-.40	-.45	-.03*	+.04*	+.29
Fiber str. (0 gage).....	+.05*	+.31	+.28	-.54	-.32	-.10*	-.10*	+.02*	+.05*	+.09*	+.03*	-.12*	-.22
Uniformity ratio.....	-.05*	+.40	+.42	+.11	+.24	+.08*	+.25	-.06*	-.11*	+.41	+.04*	-.09*	+.16*
Regression Equation:													
Constant (a).....	+22.65	-236.48	-138.21	+1.54	-.48	-62.63	-37.42	+117.33	+114.19	-191.73	+44.96	+76.01	+49.70
Regression Coef. for:													
Grade index.....	-.12	+.37	+.19	+.02	+.02	+.14	-.01	-.42	-.27	+.35	+.48	+.07	+.22
Staple length.....	-.13	+5.32	+2.59	+.23	+.13	+2.78	+1.16	-.92	-1.27	+4.37	-.09	+.91	+.50
Micronaire.....	.00	-10.27	-5.38	-.58	-.53	+10.75	+6.90	-4.52	-4.44	-7.80	-.28	+.30	+2.64
Fiber str. (0 gage).....	+.01	+.59	+.29	-.05	-.02	-.21	-.16	+.02	+.05	+.14	+.02	-.07	-.17
Uniformity ratio.....	-.03	+2.63	+1.46	+.04	+.06	+.57	+1.40	-.24	-.37	+2.05	+.10	-.17	+.42
Standard Error (±).....	.72	6.43	3.87	.39	.34	10.67	8.16	5.64	4.40	5.88	3.66	3.28	4.01

*Statistically insignificant

Table 16.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests on 299 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable.....	6.3	106	36	6.3	4.5	100	79	19	14	63	91	103	103
Grayness.....	2	2	2	2	2	2	2	2	2	2	2	2	2
Yellowness.....	3	3	3	3	3	3	3	3	3	3	3	3	3
Nonlint content (S.A.)....	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
2.5% span length.....	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Micronaire.....	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Standard Deviation (±) for:													
Dependent variable.....	.95	11.4	6.1	.60	.45	12.6	9.7	6.8	5.6	8.7	4.3	3.4	4.6
Grayness.....	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
Yellowness.....	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6
Nonlint content (S.A.)....	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2.5% span length.....	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
Micronaire.....	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51
Simple Correlation Coef. for													
Grayness.....	+.39	-.49	-.45	-.33	-.42	-.03	-.02	+.21	+.19	-.40	-.69	-.17	-.22
Yellowness.....	-.04	+.01	+.04	-.24	-.19	-.13	-.14	+.10	+.08	-.06	+.06	-.30	+.10
Nonlint content (S.A.)....	+.73	-.29	-.28	+.05	-.01	-.24	-.20	+.47	+.46	-.29	-.26	-.02	-.23
2.5% span length.....	-.31	+.54	+.49	+.34	+.32	+.19	+.11	-.20	-.24	+.62	+.24	+.21	+.31
Micronaire.....	-.17	-.05	-.05	-.48	-.47	+.48	+.48	-.44	-.52	-.10	+.12	.00	+.39
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS													
Multiple Cor. Coef.....	.41	.50	.46	.38	.44	.13	.14	.22	.19	.40	.71	.33	.26
Partial Cor. Coef. for:													
Grayness.....	+.40	-.50	-.46	-.31	-.41	-.02	-.01	+.20	+.18	-.39	-.70	-.14	-.24
Yellowness.....	-.10	+.08	+.11	-.21	-.15	-.13	-.14	+.08	+.05	-.01	+.21	-.28	+.13
Beta Coefficients for:													
Grayness.....	+.41	-.50	-.46	-.30	-.40	-.02*	-.01*	+.20	+.18	-.40	-.71	-.13*	-.24
Yellowness.....	-.10*	+.07*	+.10*	-.20	-.14*	-.13*	-.14*	+.08*	+.05*	-.01*	+.15	-.28	+.13*
Regression Equation:													
Constant (a).....	+5.90	+114.44	+39.54	+7.16	+5.13	+107.77	+85.13	+13.50	+10.86	+70.26	+94.68	+107.66	+102.23
Regression Coef. for													
Grayness.....	+.41	-6.05	-3.03	-.19	-.19	-.23	-.07	+1.45	+1.08	-3.66	-3.27	-.48	-1.16
Yellowness.....	-.14	+1.34	+.93	-.19	-.10	-2.63	-2.11	+.82	+.48	-.18	+1.04	-1.51	+.96
Standard Error (±).....	.86	9.89	5.45	.55	.40	12.47	9.60	+6.65	5.54	7.95	3.08	3.22	4.44
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.)													
Multiple Cor. Coef.....	.73	.50	.47	.43	.48	.31	.27	.50	.48	.42	.71	.33	.29
Partial Cor. Coef. for:													
Grayness.....	+.12	-.43	-.39	-.36	-.44	+.12	+.11	-.03	-.05	-.30	-.68	-.13	-.16
Yellowness.....	+.02	+.07	+.09	-.18	-.12	-.18	-.18	+.17	+.14	-.04	+.22	-.28	+.11
Nonlint (S.A.).....	+.67	-.08	-.08	+.20	+.19	-.28	-.24	+.46	+.44	-.15	+.11	+.02	-.13
Beta Coefficients for:													
Grayness.....	+.09*	-.46	-.43	-.40	-.49	+.13*	+.12*	-.03*	-.05*	-.33	-.75	-.14*	-.17*
Yellowness.....	+.01*	+.06*	+.08*	-.17	-.11*	-.18	-.18	+.15	+.13*	-.04*	+.16	-.28	+.11*
Nonlint (S.A.).....	+.69	-.08*	-.08*	+.21	+.19	-.32	-.27	+.50	+.49	-.15*	+.09*	+.02*	-.14*
Regression Equation:													
Constant (a).....	+4.05	+117.10	+40.98	+6.80	+4.88	+119.06	+92.41	+3.82	+3.03	-74.05	+93.62	+107.49	+104.07
Regression Coef. for:													
Grayness.....	+.09	-5.59	-2.78	-.26	-.23	+1.72	+1.19	-.22	-.27	-3.01	-3.45	-.51	-.84
Yellowness.....	+.02	+1.10	+.81	-.16	-.08	-3.62	-2.75	+1.67	+1.17	-.51	+1.13	-1.50	+.80
Nonlint (S.A.).....	+.66	-.95	-.51	+.13	+.09	-4.02	-2.60	+3.45	+2.79	-1.35	+.38	+.06	-.66
Standard Error (±).....	.64	9.86	5.43	.54	.39	11.96	9.33	5.91	4.96	7.87	3.06	3.22	4.40

*Statistically insignificant

Table 16.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH													
Multiple Cor. Coef.....	.75	.66	.61	.49	.52	.35	.28	.51	.50	.67	.71	.35	.39
Partial Cor. Coef. for:													
Grayness.....	+.08	-.36	-.32	-.27	-.37	+.15	+.12	-.06	-.08	-.23	-.66	-.09	-.09
Yellowness.....	-.02	+.16	+.17	-.14	-.09	-.16	-.17	+.15	+.12	+.06	+.23	-.26	+.16
Nonlint (S.A.).....	+.67	-.05	-.05	+.23	+.22	-.27	-.23	+.45	+.44	-.12	+.12	+.03	-.11
2.5% span length.....	-.24	+.50	+.44	+.27	+.24	+.16	+.07	-.11	-.18	+.58	+.09	+.15	+.28
Beta Coefficients for:													
Grayness.....	+.06*	-.34	-.31	-.30	-.41	+.17*	+.14*	-.06*	-.08*	-.20	-.73	-.10*	-.09*
Yellowness.....	-.01*	+.13*	+.14*	-.13*	-.08*	-.16*	-.17*	+.14*	+.11*	+.04*	+.17	-.26	+.15*
Nonlint (S.A.).....	+.67	-.04*	-.04*	+.24	+.22	-.30	-.26	+.49	+.48	-.10*	+.09*	+.03*	-.12*
2.5% span length.....	-.17	+.45	+.41	+.26	+.22	+.16*	+.07*	-.10*	-.17	+.55	+.07*	+.15*	+.29
Regression Equation:													
Constant (a).....	+9.52	-55.52	-44.10	+1.56	+1.54	+51.55	+69.47	+27.24	+34.17	-86.01	+84.05	+90.78	+60.18
Regression Coef. for:													
Grayness.....	+.06	-4.11	-2.04	-.19	-.19	+2.30	+1.41	-.41	-.50	-1.84	-3.35	-.35	-.46
Yellowness.....	-.02	+2.29	+1.39	-.12	-.06	-3.16	-2.59	+1.50	+.95	+.59	+1.20	-1.38	+1.10
Nonlint (S.A.).....	+.64	-.46	-.27	+.14	+.10	-3.83	-2.53	+3.38	+2.70	-.90	+.41	+.11	-.53
2.5% span length.....	-4.80	+150.47	+74.14	+4.53	+2.89	+58.85	+19.97	-20.44	-27.21	+139.88	+8.30	+14.52	+38.25
Standard Error (±).....	.62	8.56	4.87	.52	.38	11.80	9.30	5.88	4.88	6.42	3.05	3.18	4.22
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.....	.75	.68	.63	.68	.69	.55	.54	.61	.64	.71	.72	.35	.50
Partial Cor. Coef. for:													
Grayness.....	+.06	-.33	-.29	-.20	-.32	+.08	+.03	+.02	.00	-.18	-.67	-.09	-.16
Yellowness.....	-.03	+.19	+.19	-.09	-.03	-.23	-.25	+.21	+.19	+.10	+.21	-.26	+.12
Nonlint (S.A.).....	+.66	-.11	-.10	+.09	+.06	-.15	-.10	+.37	+.35	-.21	+.17	+.04	-.01
2.5% span length.....	-.25	+.52	+.47	+.40	+.37	+.09	-.02	-.05	-.11	+.62	+.05	+.14	+.24
Micronaire.....	+.08	-.21	-.19	-.53	-.54	+.45	+.48	-.39	-.47	-.32	+.19	+.03	+.34
Beta Coefficients for:													
Grayness.....	+.05*	-.30	-.28	-.19	-.30	+.08*	+.03*	+.02*	.00*	-.15	-.76	-.10*	-.16*
Yellowness.....	-.02*	+.15	+.16	-.07*	-.02*	-.21	-.22	+.18	+.15	+.07*	+.16	-.26	+.11*
Nonlint (S.A.).....	+.69	-.10*	-.10*	+.08*	+.05*	-.16*	-.10*	+.38	+.33	-.18	+.14*	+.04*	-.01*
2.5% span length.....	-.18	+.48	+.44	+.35	+.31	+.08*	-.02*	-.04*	-.09*	+.60	+.04*	+.14*	+.23
Micronaire.....	+.06*	-.17	-.16	-.50	-.50	+.45	+.50	-.36	-.43	-.25	+.14	+.03*	+.34
Regression Equation:													
Constant (a).....	+9.37	-50.23	-41.40	+2.36	+2.14	+35.93	+56.29	+33.95	+40.92	-80.00	+82.39	+90.50	+55.95
Regression Coef. for:													
Grayness.....	+.05	-3.69	-1.82	-.12	-.14	+1.05	+.33	+.12	+.02	-1.38	-3.49	-.37	-.80
Yellowness.....	-.03	+2.63	+1.57	-.07	-.02	-4.18	-3.45	+1.94	+1.39	+.98	+1.09	-1.40	+.83
Nonlint (S.A.).....	+.66	-1.09	-.59	+.05	+.02	-1.97	-.96	+2.59	+1.90	-1.61	+.61	+.14	-.03
2.5% span length.....	-5.08	+160.34	+79.19	+6.05	+4.02	+29.67	-4.75	-7.94	-14.66	+151.05	+5.16	+13.97	+30.34
Micronaire.....	+.11	-3.81	-1.95	-.59	-.44	+11.27	+9.55	-4.83	-4.85	-4.32	+1.21	+.21	+3.06
Standard Error (±).....	.62	8.37	4.78	.44	.32	10.55	8.15	5.42	4.32	6.09	2.99	3.18	3.97

*Statistically insignificant

Table 17.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurement with processing tests performed on 299 medium staple samples, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable.....	6.3	106	36	6.3	4.8	100	79	19	14	63	91	103	103
2.5% span length.....	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Micronaire.....	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
Fiber str. (1/8" gage).....	23	23	23	23	23	23	23	23	23	23	23	23	23
Uniformity ratio.....	44	44	44	44	44	44	44	44	44	44	44	44	44
Elongation (1/8" gage).....	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Standard Deviation (±) for													
Dependent variable.....	.95	11.4	6.1	.60	.45	12.6	9.7	6.8	5.6	8.7	4.3	3.4	4.6
2.5% span length.....	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03	.03
Micronaire.....	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51	.51
Fiber str. (1/8" gage).....	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Uniformity ratio.....	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Elongation (1/8" gage).....	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81
Simple Correlation Coef. for:													
2.5% span length.....	-.31	+.54	+.49	+.34	+.32	+.19	+.11	-.20	-.24	+.62	+.24	+.21	+.31
Micronaire.....	-.17	-.05	-.05	-.48	-.47	+.48	+.49	-.44	-.52	-.10	+.12	.00	+.39
Fiber str. (1/8" gage).....	-.31	+.75	+.73	-.16	+.09	+.10	+.14	-.18	-.22	+.53	+.28	-.03	+.08
Uniformity ratio.....	-.25	+.46	+.45	-.31	-.16	+.35	+.44	-.38	-.45	+.36	+.20	-.03	+.31
Elongation (1/8" gage).....	-.11	-.12	-.14	+.69	+.50	+.04	-.04	-.07	-.07	+.10	+.08	+.23	+.19
Multiple Cor. Data for:													
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE													
Multiple Cor. Coef.....	.33	.56	.51	.64	.62	.50	.49	.46	.55	.65	.25	.22	.46
Partial Cor. Coef. for:													
2.5% span length.....	-.29	+.56	+.51	+.48	+.46	+.14	+.03	-.15	-.19	+.65	+.22	+.22	+.28
Micronaire.....	-.12	-.17	-.15	-.57	-.56	+.47	+.48	-.43	-.50	-.26	+.08	-.03	+.36
Beta Coefficients for:													
2.5% span length.....	-.29	+.57	+.51	+.42	+.41	+.12*	+.03*	-.13*	-.17	+.65	+.22	+.22	+.26
Micronaire.....	-.12*	-.14	-.13*	-.55	-.54	+.46	+.49	-.42	-.50	-.20	+.08*	-.03*	+.35
Regression Equation:													
Constant (a).....	+15.96	-86.17	-58.28	+.88	+.62	+3.73	+30.92	+71.19	+67.35	-104.25	+57.88	+79.64	+51.64
Regression Coef. for:													
2.5% span length.....	-7.95	+187.65	+92.08	+7.37	+5.31	+43.99	+8.40	-26.19	-27.35	+165.38	+27.62	+21.71	+34.50
Micronaire.....	-.22	-3.20	-1.56	-.64	-.47	+11.51	+9.35	-5.71	-5.51	-3.47	+.70	-.21	+3.14
Standard Error (±).....	.89	9.43	5.28	.46	.35	10.93	8.43	6.04	4.73	6.56	4.21	3.32	4.07
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE FIBER STR. (1/8" GAGE)													
Multiple Cor. Coef.....	.39	.85	.81	.67	.62	.50	.49	.47	.55	.75	.32	.24	.47
Partial Cor. Coef. for:													
2.5% span length.....	-.22	+.52	+.43	+.53	+.42	+.14	+.02	-.12	-.16	+.60	+.14	+.24	+.29
Micronaire.....	-.09	-.41	-.36	-.56	-.56	+.47	+.48	-.42	-.49	-.36	+.05	-.01	+.37
Fiber str. (1/8" gage)...	-.22	+.76	+.73	-.27	+.08	-.05	+.04	-.06	-.08	+.49	+.21	-.11	-.10
Beta Coefficients for:													
2.5% span length.....	-.22	+.35	+.30	+.50	+.39	+.13	+.02*	-.11*	-.14*	+.53	+.15*	+.26	+.29
Micronaire.....	-.09*	-.24	-.23	-.51	-.55	+.47	+.48	-.42	-.48	-.26	+.05*	-.01*	+.36
Fiber str. (1/8" gage)...	-.22	+.68	+.68	-.22	+.07*	-.04*	+.03*	-.05*	-.07*	+.40	+.22	-.12*	-.09*
Regression Equation:													
Constant (a).....	+16.16	-93.80	-62.36	+1.01	+.59	+4.26	+30.60	+71.56	+67.72	-107.65	+56.95	+80.03	+52.05
Regression Coef. for:													
2.5% span length.....	-6.01	+114.80	+53.08	+8.63	+5.02	+48.99	+5.30	-22.70	-23.74	+132.94	+18.78	+25.50	+38.33
Micronaire.....	-.16	-5.50	-2.80	-.61	-.48	+11.67	+9.25	-5.60	-5.40	-4.49	+.42	-.09	+3.26
Fiber str. (1/8" gage).	-.11	+4.21	+2.25	-.07	+.02	-.29	+.18	-.20	-.21	+1.88	+.51	-.22	-.22
Standard Error (±).....	.87	6.08	3.61	.44	.35	10.92	8.43	6.03	4.72	5.72	4.11	3.30	4.05

*Statistically insignificant

Table 17.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO													
Multiple Cor. Coef.....	.39	.88	.84	.67	.63	.51	.53	.48	.57	.81	.32	.24	.49
Partial Cor. Coef. for:													
2.5% span length.....	-.19	+.58	+.48	+.47	+.38	+.10	-.05	-.07	-.11	+.66	+.13	+.23	+.23
Micronaire.....	-.04	-.58	-.51	-.49	-.52	+.34	+.30	-.28	-.34	-.54	+.01	.00	+.23
Fiber str. (1/8" gage)....	-.16	+.66	+.61	-.25	+.02	-.09	-.08	+.02	+.02	+.28	+.16	-.08	-.15
Uniformity ratio.....	-.06	+.46	+.41	+.03	+.10	+.11	+.21	-.13	-.16	+.44	+.04	-.03	+.14
Beta Coefficients for:													
2.5% span length.....	-.20	+.36	+.31	+.48	+.36	+.10*	-.05*	-.07*	-.10*	+.55	+.14*	+.27	+.23
Micronaire.....	-.04*	-.43	-.41	-.53	-.61	+.40	+.34	-.33	-.38	-.48	-.02*	.00*	+.26
Fiber str. (1/8" gage)....	-.18*	+.52	+.53	-.24	+.02*	-.10*	-.09*	-.02*	+.02*	+.21	+.19*	-.10*	-.17*
Uniformity ratio.....	-.08*	+.36	+.35	+.04*	+.12*	+.14*	+.27	-.17*	-.19*	+.43	+.06*	-.04*	-.19*
Regression Equation:													
Constant (a).....	+16.92	-163.06	-99.05	+.93	+.14	-8.14	+10.30	+80.38	+76.51	-172.83	+54.62	+80.87	+46.39
Regression Coef. for:													
2.5% span length.....	-5.55	+119.27	+55.94	+8.38	+4.69	+35.91	-14.10	-14.64	-16.18	+139.64	+17.14	+26.47	+31.20
Micronaire.....	-.08	-9.70	-4.98	-.63	-.54	+9.93	+6.54	-4.45	-4.29	-8.26	+.15	+.03	+2.38
Fiber str. (1/8" gage)..	-.09	+3.24	+1.75	-.08	.00	-.69	-.45	+.07	+.05	+1.00	+.45	-.19	-.43
Uniformity ratio.....	-.05	+2.35	+1.23	+.01	+.03	+.98	+1.52	-.64	-.62	+2.11	+.15	-.07	+.49
Standard Error (±).....	.87	5.39	3.30	.44	.35	10.85	8.23	5.98	4.66	5.14	4.11	3.30	4.01
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO, ELONGATION (1/8" GAGE)													
Multiple Cor. Coef.....	.44	.88	.84	.83	.76	.52	.54	.52	.60	.82	.36	.29	.53
Partial Cor. Coef. for:													
2.5% span length.....	-.09	+.52	+.43	+.28	+.18	+.04	-.09	+.02	.00	+.59	+.04	+.15	+.11
Micronaire.....	-.05	-.58	-.51	-.57	-.57	+.35	+.31	-.30	-.36	-.54	+.02	+.01	+.25
Fiber str. (1/8" gage)....	-.22	+.66	+.60	-.02	+.24	-.04	-.04	-.06	-.07	+.34	+.21	-.03	-.06
Uniformity ratio.....	-.09	+.47	+.41	+.17	+.21	+.13	+.23	-.16	-.19	+.47	+.07	.00	+.18
Elongation (1/8" gage)....	-.21	+.10	+.06	+.66	+.54	+.13	+.11	-.22	-.24	+.25	+.18	+.16	+.24
Beta Coefficients for:													
2.5% span length.....	-.10*	+.34	+.30	+.21	+.15	+.04*	-.10*	+.03*	.00	+.49	+.05*	+.19*	+.12*
Micronaire.....	-.06*	-.43	+.41	-.50	-.58	+.41	+.35	-.34	-.40	-.48	+.03*.	+.02*	+.28
Fiber Str. (1/8" gage)....	-.27	+.55	+.54	-.02*	+.21	-.05*	-.04*	-.07*	-.07*	+.28	+.27	-.03*	-.07*
Uniformity ratio.....	-.13*	+.37	+.36	+.14*	+.21	+.16*	+.29	-.21*	-.24	+.46	+.10*	.00*	+.23
Elongation (1/8" gage)....	-.23	+.06*	+.04*	+.58	+.50	+.13*	+.11*	-.23	-.23	+.17	+.21	+.18*	+.25
Regression Equation:													
Constant (a).....	+17.85	-166.57	-100.34	-.18	-.79	-14.72	+6.17	+86.57	+81.83	-181.46	+50.89	+78.51	+42.04
Regression Coef. for:													
2.5% span length.....	-2.83	+112.25	+53.41	+3.72	+1.89	+14.24	-27.40	+5.06	+.53	+123.04	+5.93	+18.52	+16.28
Micronaire.....	-.11	-9.62	-4.96	-.59	-.51	+10.13	+6.66	-4.63	-4.44	-8.09	+.25	+.10	+2.52
Fiber str. (1/8" gage)..	-.14	+3.37	-1.79	.00	+.05	-.34	-.23	-.26	-.23	+1.31	+.64	-.06	-.18
Uniformity ratio.....	-.07	+2.41	+1.25	+.05	+.05	+1.15	+1.63	-.80	-.76	+2.27	+.24	-.01	+.61
Elongation (1/8" gage)..	-.27	+.77	+.28	+.43	+.27	+2.09	+1.29	-1.91	-1.63	+1.85	+1.10	+.76	+1.42
Standard Error (±).....	.85	5.37	3.29	.33	.29	10.76	8.18	5.84	4.52	4.98	4.04	3.26	3.89

*Statistically insignificant

Table 18.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 35 long staple samples, carded yarns, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable	8.2	114	39	6.1	4.6	101	77	20	15	75	91	103	102
Grade index	92	92	92	92	92	92	92	92	92	92	92	92	92
Staple length	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8
Micronaire	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Fiber strength (0 gage)	87	87	87	87	87	87	87	87	87	87	87	87	87
Uniformity ratio	44	44	44	44	44	44	44	44	44	44	44	44	44
Standard Deviation (±) for													
Dependent variable	1.07	13.0	6.3	4.1	.33	9.7	7.6	5.6	4.6	12.7	3.1	3.1	4.4
Grade index	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Staple length	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
Micronaire	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
Fiber strength (0 gage)	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Uniformity ratio	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Simple Correlation Coef. for:													
Grade index	-.71	+.32	+.31	-.15	-.09	+.10	+.10	-.30	-.31	+.26	+.06	+.20	-.15
Staple length	-.69	+.75	+.72	+.03	+.21	-.19	+.11	-.11	-.06	+.70	-.32	+.20	-.32
Micronaire	+.15	-.57	-.55	-.62	-.67	+.34	+.26	-.31	-.29	-.55	-.10	-.27	+.50
Fiber strength (0 gage)	-.50	+.80	+.79	-.12	+.23	-.36	+.04	-.03	-.13	+.74	-.32	+.03	-.64
Uniformity ratio	-.41	+.49	+.48	-.21	.00	-.03	+.22	-.25	-.20	+.49	-.19	-.03	-.02
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH													
Multiple Cor. Coef.	.80	.75	.73	.19	.32	.30	.12	.30	.33	.71	.42	.23	.32
Partial Cor. Coef. for:													
Grade index	-.56	-.13	-.11	-.19	-.24	+.24	+.05	-.28	-.33	-.18	+.28	+.11	+.02
Staple length	-.52	+.72	+.69	+.13	+.31	-.28	+.07	+.05	+.13	+.69	-.41	+.12	-.28
Beta Coefficients for:													
Grade index	-.48	-.10*	-.09*	-.22*	-.28*	+.27*	+.06*	-.33*	-.38*	-.15*	+.31*	+.13*	+.02*
Staple length	-.43	+.80	+.77	+.15*	+.36*	-.33*	+.08*	+.06*	+.14*	+.78	-.48*	+.14*	-.33*
Regression Equation:													
Constant (a)	+40.08	-263.43	-138.33	+6.15	+2.32	+158.48	+40.44	+54.66	+35.32	-267.39	+125.48	+75.13	+156.76
Regression Coef. for:													
Grade index	-.15	-.36	-.16	-.03	-.03	+.76	+.12	-.52	-.50	-.54	+.28	+.11	+.02
Staple length	-.51	+11.46	+5.37	+.07	+.13	-3.57	+.69	+.38	+.72	+10.97	-1.67	+.48	-1.59
Standard Error (±)	.64	8.55	4.34	.40	.31	9.24	7.59	5.32	4.29	8.90	2.84	3.06	4.16
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH MICRONAIRE													
Multiple Cor. Coef.	.80	.82	.79	.65	.67	.37	.35	.42	.40	.78	.55	.36	.55
Partial Cor. Coef. for:													
Grade index	-.56	+.08	+.08	+.08	+.01	+.14	-.08	-.16	-.23	.00	+.41	+.21	-.18
Staple length	-.44	+.61	+.57	-.24	-.02	-.15	+.22	-.10	.00	+.57	-.53	-.03	-.04
Micronaire	+.11	-.50	-.47	-.63	-.63	+.23	+.33	-.30	-.23	-.44	-.39	-.28	+.47
Beta Coefficients for:													
Grade index	-.51	+.06*	+.07	+.08*	+.01*	+.17*	-.10*	-.19*	-.28*	.00*	+.48*	+.26*	-.20*
Staple length	-.39*	+.59	+.56	-.25*	-.02*	-.19*	+.29*	-.12*	.00*	+.58	-.71	-.04*	-.04*
Micronaire	+.08*	-.38	-.37	-.71	-.68	+.25*	+.37*	-.33*	-.25*	-.35*	-.41*	-.31*	+.51*
Regression Equation:													
Constant (a)	+38.28	-159.91	-88.44	+12.35	+7.12	+106.22	-19.88	+93.48	+59.36	-172.22	+152.32	+96.12	+109.17
Regression Coef. for:													
Grade index	-.16	+.22	+.12	+.01	.00	+.46	-.22	-.30	-.36	-.01	+.43	+.23	-.25
Staple length	-.46	+8.45	+3.92	-.11	-.01	-2.05	+2.45	-.75	+.02	+8.19	-2.46	-.13	-.20
Micronaire	+.22	-12.65	-6.10	-.76	-.59	+6.39	+7.37	-4.74	-2.94	-11.63	-3.28	-2.56	+5.82
Standard Error (±)	.64	7.41	3.82	.31	.24	8.98	7.18	5.07	4.18	7.99	2.62	2.93	3.68

*Statistically insignificant

Table 18.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (0 GAGE)													
Multiple Cor. Coef.....	.80	.90	.88	.69	.68	.49	.35	.42	.42	.85	.57	.40	.78
Partial Cor. Coef. for:													
Grade index.....	-.56	-.11	-.07	+.04	.00	+.17	-.08	-.17	-.24	-.11	+.41	+.21	-.01
Staple length.....	-.36	+.33	+.27	-.04	-.09	+.07	+.21	-.12	+.08	+.30	-.39	+.08	+.42
Micronaire.....	+.11	-.58	-.54	-.66	-.63	+.23	+.32	-.30	-.24	-.48	-.40	-.29	+.55
Fiber str. (0 gage).....	-.04	+.67	+.64	-.30	+.12	-.34	-.04	+.06	-.14	+.54	-.19	-.18	-.67
Beta Coefficients for:													
Grade index.....	-.51	-.06*	-.05*	+.04*	.00*	+.19*	-.10*	-.19*	-.28*	-.07*	+.46*	+.25*	-.01*
Staple length.....	-.37*	+.24*	+.21*	-.04*	-.11*	+.09*	+.32*	-.17*	+.13*	+.27*	-.56*	+.12*	+.47*
Micronaire.....	+.08*	-.35	-.35	-.73	-.68	+.23*	+.37*	-.32*	-.26*	-.33	-.42*	-.33*	+.48*
Fiber str. (0 gage).....	-.03*	+.53	+.53	-.32*	+.12*	-.43*	-.05*	+.08*	-.18*	+.47	-.23*	-.24*	-.78
Regression Equation:													
Constant (a).....	+39.93	-44.55	-33.30	+11.32	+7.63	+54.95	-24.38	+98.44	+50.57	-82.85	+146.25	+88.90	+50.28
Regression Coef. for:													
Grade index.....	-.16	-.22	-.08	.00	.00	+.52	-.22	-.31	-.37	-.27	+.41	+.22	-.01
Staple length.....	-.44	+3.48	+1.47	-.02	-.04	+1.01	+2.75	-1.07	+.63	+.83	-1.95	+.41	+2.28
Micronaire.....	+.22	-11.84	-5.70	-.77	-.58	+5.89	+7.32	-4.69	-3.04	-10.92	-3.36	-2.65	+5.41
Fiber str. (0 gage)....	-.01	+1.15	+.57	-.02	+.01	-.71	-.07	+.07	-.14	+1.01	-.12	-.13	-.58
Standard Error (±).....	.64	5.53	2.95	.30	.24	8.46	7.17	5.06	4.14	6.72	2.57	2.88	2.72
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (0 GAGE), UNIFORMITY RATIO													
Muptiple Cor. Coef.....	.80	.92	.90	.69	.69	.49	.35	.43	.42	.87	.59	.40	.80
Partial Cor. Coef. for:													
Grade index.....	-.56	-.06	-.03	+.05	+.02	+.17	-.08	-.18	-.24	-.07	+.42	+.20	+.02
Staple length.....	-.32	+.16	+.10	-.07	-.15	+.03	+.16	-.06	+.10	+.13	-.43	+.09	+.31
Micronaire.....	+.11	-.66	-.62	-.64	-.63	+.18	+.27	-.22	-.19	-.58	-.44	-.25	+.45
Fiber str. (0 gage).....	-.03	+.64	+.61	-.31	+.08	-.34	-.06	+.09	-.12	+.50	-.24	-.17	-.69
Uniformity ratio.....	-.03	+.38	+.36	+.09	+.16	+.06	+.07	-.12	-.06	+.38	+.20	-.05	+.24
Beta Coefficients for:													
Grade index.....	-.52	-.03*	-.02*	+.04*	+.02*	+.20*	-.09*	-.20*	-.29*	-.04*	+.48*	+.24*	+.02*
Staple length.....	-.36*	+.12*	+.08*	-.09*	-.20*	+.05*	+.28*	-.09*	+.17*	+.12*	-.69	+.15*	+.35*
Micronaire.....	+.09*	-.44	-.44	-.77	-.74	+.20*	+.33*	-.26*	-.22*	-.44*	-.51*	-.30*	+.39*
Fiber str. (0 gage).....	-.03*	+.47	+.47	-.34*	+.08*	-.45*	-.08*	+.12*	-.16*	+.40	-.28*	-.22*	-.83
Uniformity ratio.....	-.02*	+.22	+.23*	+.09	+.16*	+.07*	+.08*	-.15*	-.08*	+.27*	+.23*	-.06*	+.20*
Regression Equation:													
Constant (a).....	+37.96	-52.77	-37.23	+11.30	+7.54	+53.79	-25.24	+99.58	+51.00	-90.92	+145.77	+89.08	+47.65
Regression Coef. for:													
Grade index.....	-.16	-.11	-.03	+.01	.00	+.54	-.20	-.33	-.37	-.15	+.42	+.22	+.02
Staple length.....	-.42	+1.66	+.56	-.04	-.07	+.56	+2.34	-.55	+.86	+1.65	-2.39	+.53	+1.72
Micronaire.....	+.24	-14.91	-7.24	-.81	-.64	+5.13	+6.64	-3.82	-2.65	-14.61	-4.11	-2.46	+4.46
Fiber str. (0 gage)....	.00	+1.02	+.50	-.02	.00	-.74	-.10	+.11	-.12	+.86	-.15	-.12	-.62
Uniformity ratio.....	-.02	+1.96	+.98	+.02	+.04	+.48	+.44	-.56	-.25	+2.36	+.48	-.13	+.61
Standard Error (±).....	.64	5.11	2.75	.29	.24	8.44	7.15	5.03	4.13	6.23	2.52	2.88	2.64

*Statistically insignificant

Table 19.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 35 long staple samples, carded yarn, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Mean Values for:													
Dependent variable	8.2	114	39	6.1	4.6	101	77	20	15	75	91	103	102
Grayness	2	2	2	2	2	2	2	2	2	2	2	2	2
Yellowness	3	3	3	3	3	3	3	3	3	3	3	3	3
Nonlint content (S.A.)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
2.5% span length	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Micronaire	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Standard Deviation (±) for:													
Dependent variable	1.07	13.0	6.3	.41	.33	9.7	7.6	5.6	4.6	12.7	3.1	3.1	4.4
Grayness	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7
Yellowness	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6	.6
Nonlint content (S.A.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2.5% span length	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
Micronaire	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
Simple Correlation Coef. for:													
Grayness	+.24	-.39	-.38	-.34	-.37	.00	.00	+.06	+.05	-.31	-.44	-.11	+.35
Yellowness	+.29	-.49	-.50	.00	-.19	+.26	+.08	-.14	-.08	-.49	+.25	-.08	+.55
Nonlint content (S.A.)	+.85	-.50	-.52	+.16	-.02	+.14	+.02	+.19	+.24	-.46	-.05	-.05	+.15
2.5% span length	-.32	+.53	+.54	+.20	+.38	-.19	+.04	-.31	-.38	+.53	.00	-.02	-.04
Micronaire	-.15	-.57	-.55	-.62	-.67	+.34	+.26	-.31	+.29	-.55	-.10	-.27	+.50
Multiple Cor. Data for:													
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS													
Multiple Cor. Coef.	.33	.55	.56	.35	.38	.27	.09	.18	.11	.52	.60	.12	.58
Partial Cor. Coef. for:													
Grayness	+.16	-.29	-.27	-.35	-.34	-.08	-.03	+.11	+.08	-.19	-.56	-.09	+.23
Yellowness	+.23	-.42	-.44	+.11	-.08	+.27	+.09	-.17	-.10	-.44	+.45	-.05	+.50
Beta Coefficients for:													
Grayness	+.16*	-.27*	-.25*	-.37*	-.35*	-.08*	-.03*	+.11*	+.08*	-.18*	-.57	-.09*	+.20*
Yellowness	+.24*	-.40*	-.43*	+.11*	-.08*	+.29*	+.09*	-.18*	-.11*	-.44*	+.43*	-.05*	+.49
Regression Equation:													
Constant (a)	+6.52	+148.41	+56.06	+6.36	+5.07	+89.71	+73.91	+22.85	+16.61	+107.79	+90.27	+104.42	+89.23
Regression Coef. for:													
Grayness	+.26	-5.28	-2.36	-.23	-.18	-1.18	-.35	+.93	+.59	-3.41	-2.72	-.44	+1.35
Yellowness	+.46	-9.44	-4.87	+.08	-.05	+5.05	+1.28	-1.78	-.89	-10.02	+2.42	-.30	+3.87
Standard Error (±)	1.01	10.83	5.24	.38	.31	9.31	7.62	5.49	4.52	10.84	2.50	3.12	3.57
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.)													
Multiple Cor. Coef.	.86	.66	.68	.42	.39	.29	.09	.28	.28	.62	.60	.12	.58
Partial Cor. Coef. for:													
Grayness	+.01	-.24	-.21	-.40	-.35	-.10	-.03	+.07	+.03	-.13	-.56	-.08	+.23
Yellowness	+.21	-.40	-.43	+.08	-.10	+.26	+.09	-.20	-.14	-.42	+.45	-.05	+.49
Nonlint (S.A.)	+.84	-.44	-.46	+.25	+.08	+.11	+.01	+.22	+.25	-.40	.00	-.01	+.01
Beta Coefficients for:													
Grayness	+.01*	-.20*	-.17*	-.42*	-.36*	-.10*	-.03*	+.07*	+.04*	-.11*	-.57	-.09*	+.20*
Yellowness	+.12*	-.35*	-.37*	+.08*	-.09*	+.27*	+.09*	-.21*	-.15*	-.38*	+.43*	-.05*	+.49
Nonlint (S.A.)	+.82	-.38*	-.40*	+.25*	+.08*	+.11*	+.01*	+.22*	+.26*	-.36*	.00*	-.02*	+.01*
Regression Equation:													
Constant (a)	+4.64	+158.98	+61.46	+6.15	+5.02	+87.52	+73.78	+20.22	+14.09	+117.47	+90.29	+104.52	+89.16
Regression Coef. for:													
Grayness	+.01	-3.85	-1.64	-.26	-.18	-1.48	-.37	+.58	+.25	-2.11	-2.72	-.42	+1.34
Yellowness	+.22	-8.13	-4.20	+.06	-.06	+4.78	+1.27	-2.11	-1.20	-8.82	+2.42	-.29	+3.86
Nonlint (S.A.)	+.86	-4.83	-2.46	+.10	+.03	+1.00	+.06	+1.20	+1.15	-4.42	-.01	-.05	+.03
Standard Error (±)	.55	9.72	4.64	.37	.30	9.26	7.62	5.36	4.38	9.92	2.50	3.12	3.57

*Statistically insignificant

Table 19.--Continued

Statistical Items	Dependent Variables											
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH													
Multiple Cor. Coef.....	.86	.76	.77	.54	.58	.31	.11	.43	.47	.72	.62	.13	.59
Partial Cor. Coef. for:													
Grayness.....	+.03	-.36	-.34	-.42	-.41	-.09	-.04	+.12	+.10	-.23	-.57	-.08	+.22
Yellowness.....	+.17	-.31	-.34	+.19	+.04	+.23	+.10	-.30	-.26	-.34	+.48	-.06	+.50
Nonlint (S.A.).....	+.82	-.36	-.39	+.36	+.23	+.08	+.03	+.12	+.15	-.31	+.05	-.02	+.04
2.5% span length.....	-.11	+.49	+.50	+.38	+.46	-.09	+.07	-.35	-.39	+.46	+.19	-.04	+.12
Beta Coefficients for:													
Grayness.....	+.02*	-.27*	-.25*	-.41*	-.39*	-.09*	-.04*	+.12*	+.09*	-.18*	-.59	-.09*	+.19*
Yellowness.....	+.10*	-.24*	-.26*	+.18*	+.03*	+.25*	+.11*	-.31*	-.26*	-.28*	+.47	-.06*	+.51
Nonlint (S.A.).....	+.81	-.27*	-.29*	+.35*	+.21*	+.08*	+.03*	+.12*	+.15*	-.25*	+.04*	-.03*	+.04*
2.5% span length.....	-.06*	+.41	+.40	+.37*	+.47*	-.10*	+.08*	-.37*	-.41*	+.40*	+.16*	-.04*	+.10
Regression Equation:													
Constant (a).....	+8.48	-146.09	-85.83	-2.79	-4.03	+141.84	+39.93	+139.32	+122.91	-174.07	+60.24	+111.89	+62.92
Regression Coef. for:													
Grayness.....	+.03	-5.40	-2.38	-.26	-.20	-1.35	-.45	+.98	+.63	-3.47	-2.79	-.41	+1.28
Yellowness.....	+.19	-5.53	-2.94	+.13	+.02	+4.32	+1.55	-3.12	-2.12	-6.34	+2.68	-.35	+4.09
Nonlint (S.A.).....	+.84	-3.41	-1.78	+.14	+.07	+.75	+.22	+.65	+.65	-3.06	+.13	-.08	+.15
2.5% span length.....	-3.23	+256.79	+123.99	+7.45	+7.56	-45.49	+28.35	-99.94	-91.35	+245.23	+25.17	-6.17	+21.98
Standard Error (±).....	.55	8.46	4.02	.34	.27	9.22	7.60	5.02	4.03	8.80	2.45	3.12	3.54
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE													
Multiple Cor. Coef.....	.88	.88	.89	.77	.81	.47	.32	.53	.54	.85	.62	.29	.64
Partial Cor. Coef. for:													
Grayness.....	-.16	-.06	-.03	-.16	-.13	-.26	-.17	+.26	+.23	+.10	-.53	+.05	+.06
Yellowness.....	+.03	-.09	-.14	+.47	+.36	+.10	-.01	-.18	-.14	-.14	+.46	+.04	+.41
Nonlint (S.A.).....	+.85	-.61	-.63	+.24	+.04	+.19	+.12	+.02	+.06	-.56	+.04	-.10	+.14
2.5% span length.....	-.11	+.61	+.61	+.46	+.58	-.09	+.08	-.31	-.41	+.56	+.19	-.04	+.13
Micronaire.....	+.40	-.69	-.69	-.64	+.69	+.37	+.30	-.34	-.32	-.66	-.02	-.26	+.32
Beta Coefficients for:													
Grayness.....	-.09*	-.03*	-.01*	-.12*	-.09*	-.28*	-.20*	+.28*	+.24*	+.06*	-.58	+.05*	+.05*
Yellowness.....	+.02*	-.05*	-.08*	+.40*	+.27*	+.10*	-.01*	-.18*	-.14*	-.09*	+.48*	+.05*	+.41*
Nonlint (S.A.).....	+.87	-.41	-.43	+.18*	+.03*	+.19*	+.12*	+.02*	+.06*	-.39	+.04*	-.11*	+.12*
2.5% span length.....	-.06*	+.40	+.39	+.36*	+.46	-.09*	+.08*	-.37*	-.42*	+.39	+.16*	-.04*	+.11*
Micronaire.....	+.25	-.56	-.55	-.67	+.70	+.44*	+.37*	-.38*	-.36*	-.57	-.02*	-.33*	+.32*
Regression Equation:													
Constant (a).....	+6.06	-80.95	-54.93	-.32	-1.94	+103.58	+14.24	+158.28	+137.29	-109.20	+60.67	+121.06	+50.25
Regression Coef. for:													
Grayness.....	-.15	-.65	-.14	-.08	-.05	-4.12	-2.31	+2.36	+1.68	+1.24	-2.76	+.26	+.36
Yellowness.....	+.03	-1.19	-.88	+.30	+.16	+1.77	-.16	-1.86	-1.17	-2.02	+2.70	+.26	+3.24
Nonlint (S.A.).....	+.91	-5.22	-2.64	+.07	+.01	+1.81	+.93	+.12	+.25	-4.87	+.12	-.34	+.51
2.5% span length.....	-3.04	+251.61	+121.53	+7.25	+7.40	-42.45	+30.39	-101.45	-92.49	+240.08	+25.14	-6.90	+22.98
Micronaire.....	+.70	-18.85	-8.94	-.71	+.60	+11.07	+7.43	-5.49	-4.16	-18.77	-.12	-2.65	+3.66
Standard Error (±).....	.50	6.14	2.92	.26	.20	8.56	7.24	4.73	3.82	6.62	2.45	3.01	3.36

*Statistically insignificant

Table 20.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 35 long staple samples, carded yarn, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables											
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Dependent variable	8.2	114	39	6.1	4.6	101	77	20	15	75	91	103	102
2.5% span length	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Micronaire	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Fiber str. (1/8" gage)	24	24	24	24	24	24	24	24	24	24	24	24	24
Uniformity ratio	44	44	44	44	44	44	44	44	44	44	44	44	44
Elongation (1/8" gage)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Standard Deviation (±) for:													
Dependent variable	1.07	13.0	6.3	.41	.33	9.7	7.6	5.6	4.6	12.7	3.1	3.1	4.4
2.5% span length	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
Micronaire	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39	.39
Fiber str. (1/8" gage)	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
Uniformity ratio	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48
Elongation (1/8" gage)	.67	.67	.67	.67	.67	.67	.67	.67	.67	.67	.67	.67	.67
Simple Correlation Coef. for:													
2.5% span length	-.32	+.53	+.54	+.60	+.38	-.19	+.04	-.31	-.38	+.53	.00	-.02	-.04
Micronaire	+.15	-.57	-.55	-.62	-.67	+.34	+.26	-.31	+.29	-.55	-.10	-.27	+.50
Fiber str. (1/8" gage)	-.49	+.80	+.81	+.11	+.48	-.38	-.12	+.16	+.04	+.80	-.11	+.10	-.45
Uniformity ratio	-.41	+.49	+.48	-.21	.00	-.03	+.22	-.25	-.20	+.49	-.19	-.03	-.02
Elongation (1/8" gage)	+.28	-.41	-.40	+.38	+.15	+.04	-.22	-.07	.00	-.41	+.48	-.15	+.57
Multiple Cor. Data for:													
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE													
Multiple Cor. Coef	.35	.78	.77	.65	.77	.39	.26	.44	.48	.76	.11	.27	.50
Partial Cor. Coef. for:													
2.5% span length	-.32	+.64	+.65	+.25	+.50	-.20	+.04	-.33	-.40	+.63	-.01	-.02	-.04
Micronaire	+.15	-.67	-.65	-.63	-.72	+.34	+.26	-.33	-.31	-.64	-.10	-.27	+.50
Beta Coefficients for:													
2.5% span length	-.32*	+.53	+.54	+.19*	+.37	-.19*	+.04*	-.31*	-.38*	+.53	-.01*	-.02*	-.03*
Micronaire	+.14*	-.56	-.55	-.62	-.67	+.34*	+.26*	-.31*	-.29*	-.55	-.10*	-.27*	+.50
Regression Equation:													
Constant (a)	+25.90	-198.96	-117.66	+4.22	-.05	+169.40	+40.30	+136.27	+126.22	-232.47	+95.65	+115.29	+88.14
Regression Coef. for:													
2.5% span length	-16.65	+334.64	+165.87	+3.88	+5.98	-88.25	+13.96	-85.44	-84.50	+327.05	-.91	-3.42	-7.24
Micronaire	+.40	-18.90	-8.97	-.66	-.58	+8.49	+5.19	-4.55	-3.42	-17.95	-.84	-2.20	+5.69
Standard Error (±)	1.00	8.18	4.00	.31	.21	8.93	7.38	5.01	4.01	8.21	3.11	3.03	3.80
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE)													
Multiple Cor. Coef	.50	.87	.87	.74	.77	.43	.27	.49	.49	.86	.23	.27	.57
Partial Cor. Coef. for:													
2.5% span length	-.09	+.43	+.44	+.47	+.44	-.06	+.05	-.40	-.40	+.42	+.11	-.01	+.14
Micronaire	-.07	-.49	-.47	-.73	-.67	+.21	+.21	-.18	-.21	-.46	-.20	-.24	+.33
Fiber str. (1/8" gage)	-.38	+.61	+.63	-.47	.00	-.20	-.02	+.24	+.14	+.61	-.20	-.02	-.31
Beta Coefficients for:													
2.5% span length	-.09*	+.28*	+.28*	+.42*	+.37*	-.07*	+.05*	-.45*	-.46*	+.28*	+.12*	-.01*	+.14*
Micronaire	-.07*	-.33	-.31	-.84	-.67	+.23*	+.25*	-.18*	-.22*	-.31*	-.23*	-.28*	+.34*
Fiber str. (1/8" gage)	-.48*	+.51	+.54	-.48	.00*	-.25*	-.03*	+.29*	+.16*	+.53	-.27*	-.03*	-.36*
Regression Equation:													
Constant (a)	+20.28	-125.39	-80.39	+2.05	-.06	+142.91	+37.74	+154.06	+134.30	-158.71	+86.35	+114.34	+70.78
Regression Coef. for:													
2.5% span length	-4.86	+180.31	+87.69	+8.43	+5.99	-32.68	+19.32	-122.76	-101.45	+172.34	+18.61	-1.43	+29.18
Micronaire	-.21	-11.03	-4.99	-.89	-.58	+5.66	+4.92	-2.64	-2.55	-10.07	-1.83	-2.30	+3.83
Fiber str. (1/8" gage)	-.23	+3.03	+1.53	-.09	.00	-1.09	-.11	+.73	+.33	+3.03	-.38	-.04	-.71
Standard Error (±)	.92	6.47	3.09	.27	.21	8.74	7.37	4.86	3.97	6.50	3.04	3.02	3.61

*Statistically insignificant

Table 20.--Continued

Statistical Items	Dependent Variables												
	Picker & card waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections		Spinning Potential	Color of 22s yarn		
		Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s	Coarse 22s	Fine 50s		Gray yarn	Bleached yarn	Dyed yarn
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.	No.	Index	Index	Index
Multiple Cor. Coef.....	.53	.89	.89	.75	.78	.44	.34	.52	.49	.88	.26	.27	.57
Partial Cor. Coef. for:													
2.5% span length.....	+.03	+.33	+.35	+.47	+.46	-.13	-.11	-.19	-.31	+.32	+.17	-.02	+.08
Micronaire.....	+.01	-.59	-.56	-.68	-.61	+.15	+.12	-.09	-.19	-.55	-.13	-.24	+.29
Fiber str. (1/8" gage)....	-.28	+.49	+.53	-.38	+.09	-.23	-.12	+.30	+.13	+.50	-.13	-.03	-.30
Uniformity ratio.....	-.20	+.41	+.36	-.17	-.20	+.12	+.23	-.19	-.02	+.37	-.13	+.03	+.04
Beta Coefficients for:													
2.5% span length.....	+.04*	+.20*	+.21*	+.53*	+.50*	-.18*	-.17*	-.26*	-.44*	+.20*	+.24*	-.04*	+.10*
Micronaire.....	+.01*	-.43	-.39	-.78	-.61	+.17*	+.14*	-.10*	-.21*	-.40	-.16*	-.30*	+.32*
Fiber Str. (1/8" gage)....	-.36*	+.38	+.42	-.41*	+.08*	-.32*	-.17*	+.40*	+.17*	+.40	-.18*	-.05*	-.38*
Uniformity ratio.....	-.23*	+.27*	+.23*	-.15*	-.17*	+.15*	+.29*	-.22*	-.02*	+.25*	-.17*	+.04*	+.04*
Regression Equation:													
Constant (a).....	+17.20	-135.56	-84.94	+.77	-1.27	+173.05	+86.21	+119.98	+132.36	-166.57	+75.59	+116.83	+74.98
Regression Coef. for:													
2.5% span length.....	+2.13	+128.20	+66.11	+10.64	+8.03	-84.00	-61.86	-71.70	-98.35	+122.73	+37.45	-5.63	+22.13
Micronaire.....	+.03	-14.30	-6.36	-.83	-.52	+4.31	+2.82	-1.49	-2.48	-13.09	-1.32	-2.41	+3.65
Fiber str. (1/8" gage)....	-.18	+2.26	+1.21	-.08	+.01	-1.41	-.60	+1.00	+.35	+2.32	-.26	-.06	-.76
Uniformity ratio.....	-.17	+2.33	+.97	-.04	-.04	+.96	+1.50	-.82	-.05	+2.15	-.36	+.08	+.13
Standard Error (±).....	.91	5.92	2.89	.27	.21	8.67	7.18	4.77	3.97	6.03	3.02	3.02	3.61
DEPENDENT VARIABLE with 2.5% SPAN LENGTH,MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO,ELONGATION (1/8" GAGE)													
Multiple Cor. Coef.....	.53	.89	.89	.83	.86	.47	.45	.52	.49	.88	.53	.32	.73
Partial Cor. Coef. for:													
2.5% span length.....	+.04	+.33	+.33	+.43	+.42	-.09	-.04	-.18	-.31	+.31	+.07	+.01	-.05
Micronaire.....	.00	-.59	-.55	-.71	-.64	+.12	+.07	-.09	-.18	-.55	-.07	-.26	+.42
Fiber str. (1/8" gage)....	-.26	+.45	+.50	-.11	+.41	-.29	-.27	+.26	+.13	+.45	+.14	-.11	.00
Uniformity ratio.....	-.21	+.40	+.36	-.10	-.13	+.10	+.19	-.19	-.01	+.37	-.07	.00	+.15
Elongation (1/8" gage)....	-.04	+.01	+.06	+.55	+.58	-.18	-.32	.00	+.03	+.01	+.48	-.16	+.55
Beta Coefficients for:													
2.5% span length.....	+.05*	+.20*	+.21*	+.41*	+.37*	-.12*	-.06*	-.26*	-.45*	+.20*	+.09*	+.02*	-.05*
Micronaire.....	.00*	-.42	-.38	-.71	-.54	+.14*	+.08*	-.10*	-.20*	-.40	-.07*	-.33*	+.41*
Fiber str. (1/8" gage)....	-.39*	+.39*	+.45	-.11*	+.39*	-.46*	-.42*	+.40*	+.19*	+.41*	+.20*	-.18*	.00*
Uniformity ratio.....	-.24*	+.27*	+.23*	-.08*	-.09*	+.11*	+.23*	-.22*	-.01*	+.25*	-.07*	.00*	+.14*
Elongation (1/8" gage)....	-.04*	+.01*	+.04*	+.46	+.46	-.21*	-.38*	.00*	+.04*	+.01*	+.59*	-.20*	+.57
Regression Equation:													
Constant (a).....	+17.62	-136.66	-87.72	-.75	-2.49	+189.23	+108.94	+119.88	+131.05	-167.78	+60.44	+121.85	+55.02
Regression Coef. for:													
2.5% span length.....	+2.67	+127.31	+63.87	+8.19	+5.98	-57.34	-23.52	-71.91	-100.72	+121.74	+13.38	+2.74	-11.40
Micronaire.....	+.01	-14.27	-6.27	-.75	-.46	+3.50	+1.67	-1.48	-2.41	-13.05	-.59	-2.66	+4.65
Fiber str. (1/8" gage)..	-.19	+2.29	+1.28	-.02	+.06	-2.01	-1.46	+1.01	+.40	+2.35	+.29	-.25	-.01
Uniformity ratio.....	-.17	+2.34	+1.00	-.02	-.02	+.74	+1.17	-.82	-.03	+2.16	-.16	+.01	+.41
Elongation (1/8" gage)..	-.07	+.14	+.35	+.28	+.23	-3.02	-4.31	+.02	+.26	+.15	+2.76	-.94	+3.77
Standard Error (±).....	.90	5.91	2.89	.23	.17	8.53	6.81	4.77	3.97	6.03	2.64	2.98	3.01

*Statistically insignificant

Table 21.--Cotton: Results of multiple correlation analyses for the relationship of classification and supplemental fiber test measurements with processing tests performed on 35 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Mean Values for:									
Dependent variable	16.6	133	47	6.7	5.1	111	92	8.9	6.9
Grade index	92	92	92	92	92	92	92	92	92
Staple length	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8
Micronaire	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Fiber strength (0 gage)	87	87	87	87	87	87	87	87	87
Uniformity ratio	44	44	44	44	44	44	44	44	44
Standard Deviation (±) for:									
Dependent variable	1.85	13.3	5.7	.4	.3	9.2	7.7	3.0	2.6
Grade index	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Staple length	.90	.90	.90	.90	.90	.90	.90	.90	.90
Micronaire	.39	.39	.39	.39	.39	.39	.39	.39	.39
Fiber strength (0 gage)	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Uniformity ratio	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Simple Correlation Coef. for									
Grade index	-.16	+.35	+.37	-.25	-.13	+.04	+.10	-.19	-.22
Staple length	-.50	+.74	+.76	-.17	+.02	-.16	-.19	.00	-.07
Micronaire	+.27	-.55	-.49	-.66	-.62	+.42	+.46	-.46	-.35
Fiber strength (0 gage)	-.51	+.85	+.87	-.26	-.07	-.14	-.05	+.06	+.02
Uniformity ratio	-.41	+.49	+.53	-.48	-.12	+.14	+.18	-.12	-.16
Multiple Cor. Data for:									
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH									
Multiple Cor. Coef	.51	.75	.76	.25	.16	.21	.30	.22	.23
Partial Cor. Coef. for:									
Grade index	+.14	-.08	-.05	-.19	-.16	+.15	+.24	-.22	-.22
Staple length	-.49	+.70	+.71	-.05	+.10	-.21	-.28	+.12	+.06
Beta Coefficients for:									
Grade index	+.14*	-.06*	-.04*	-.22*	-.19*	+.17*	+.28*	-.26*	-.25*
Staple length	-.57	+.78	+.78	-.06*	+.12*	-.24*	-.33*	+.14*	+.07*
Regression Equation:									
Constant (a)	+51.76	-255.75	-122.40	+9.71	+5.15	+159.21	+137.47	+13.20	+17.57
Regression Coef. for:									
Grade index	+.07	-.22	-.06	-.02	-.02	+.44	+.61	-.23	-.19
Staple length	-1.17	+11.43	+4.91	-.02	+.04	-2.49	-2.84	+.46	+.19
Standard Error (±)	1.58	8.84	3.73	.37	.27	8.99	7.34	2.97	2.54
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE									
Multiple Cor. Coef	.52	.81	.80	.79	.66	.42	.47	.49	.41
Partial Cor. Coef. for:									
Grade index	+.10	+.13	+.11	+.18	+.12	.00	+.10	-.04	-.08
Staple length	-.42	+.59	+.61	-.55	-.28	-.01	-.09	-.12	-.12
Micronaire	+.08	-.48	-.40	-.77	-.65	+.37	+.37	-.45	-.35
Beta Coefficients for:									
Grade index	+.11*	+.09*	+.09*	+.14*	+.12*	.00*	+.11*	-.05*	-.09*
Staple length	-.53*	+.57	+.61	-.54	-.29*	-.01*	-.10*	-.15*	-.15*
Micronaire	+.08*	-.37	-.30*	-.86	-.74	+.41*	+.41*	-.51*	-.39*
Regression Equation:									
Constant (a)	+48.80	-152.42	-86.19	+16.68	+9.50	+78.55	+71.01	+46.00	+39.01
Regression Coef. for:									
Grade index	+.06	+.36	+.14	+.02	+.01	-.01	+.24	-.04	-.07
Staple length	-1.09	+8.41	+3.85	-.23	-.09	-.14	-.90	-.49	-.43
Micronaire	+.36	-12.63	-4.43	-.85	-.53	+9.86	+8.12	-4.01	-2.62
Standard Error (±)	1.58	7.76	3.42	.24	.21	8.35	6.81	2.65	2.39

*Statistically insignificant

Table 21.--Continued

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH (O GAGE)									
Multiple Cor. Coef.	.56	.93	.93	.82	.68	.42	.48	.50	.41
Partial Cor. Coef. for									
Grade index	+.11	-.15	-.12	+.10	+.11	.00	+.10	-.05	-.08
Staple length	-.24	+.26	+.29	-.33	-.13	+.01	-.15	-.14	-.14
Micronaire	+.06	-.62	-.53	-.80	-.66	+.37	+.38	-.45	-.34
Fiber str. (O gage)	-.26	+.77	+.78	-.39	-.20	-.03	+.14	+.07	+.08
Beta Coefficients for:									
Grade index	+.11*	-.07*	-.06*	+.08*	+.10*	.00*	+.11*	-.05*	-.09*
Staple length	-.33*	+.16*	+.19*	-.32*	-.15*	+.01*	-.21*	-.20*	-.22*
Micronaire	+.06*	-.34	-.27	-.87	-.75	+.41*	+.41*	-.50*	-.38*
Fiber str. (O gage)	-.31*	+.62	+.65	-.33*	-.21*	-.04*	+.17*	+.08*	+.10*
Regression Equation:									
Constant (a)	+42.36	-3.31	-24.43	+15.96	+9.00	+74.92	+84.22	+48.99	+42.00
Regression Coef. for:									
Grade index	+.06	-.27	-.09	+.01	+.01	-.01	+.25	-.04	-.07
Staple length	-.67	+2.38	+1.17	-.14	-.05	+.10	-1.83	-.68	-.62
Micronaire	+.29	-11.64	-3.99	-.87	-.54	+9.82	+8.27	-3.98	-2.59
Fiber str. (O gage)	-.10	+1.40	+.62	-.02	-.01	-.05	+.22	+.04	+.04
Standard Error (±)	1.52	4.91	2.14	.22	.20	8.35	6.75	2.64	2.38
DEPENDENT VARIABLE with GRADE INDEX, STAPLE LENGTH, MICRONAIRE, FIBER STRENGTH, (O GAGE), UNIFORMITY RATIO									
Multiple Cor. Coef.	.59	.94	.94	.83	.70	.44	.51	.50	.41
Partial Cor. Coef. for:									
Grade index	+.09	-.10	-.07	+.10	+.13	+.01	+.12	-.04	-.08
Staple length	-.14	+.09	+.11	-.24	-.23	-.06	-.22	-.16	-.13
Micronaire	+.14	-.69	-.63	-.75	-.68	+.28	+.28	-.43	-.31
Fiber str. (O gage)	-.21	+.76	+.77	-.35	-.26	-.07	+.09	+.05	+.08
Uniformity ratio	-.19	+.37	+.40	-.17	+.25	+.15	+.19	+.06	.00
Beta Coefficients for:									
Grade index	+.10*	-.04*	-.03*	+.07*	+.11*	+.01*	+.13*	-.04*	-.09*
Staple length	-.20*	+.05*	+.07*	-.25*	-.30*	-.10*	-.34*	-.24*	-.22*
Micronaire	+.15*	-.42	-.35	-.82	-.85	+.33*	+.32*	-.53*	-.38*
Fiber str (O gage)	-.25*	+.58	+.59	-.29*	-.27*	-.09*	+.11*	+.07*	+.10*
Uniformity ratio	-.22*	+.19*	+.21*	-.13*	+.26*	+.19*	+.22*	+.08*	.00*
Regression Equation:									
Constant (a)	+42.90	-11.13	-27.75	+15.96	+8.94	+72.55	+82.30	+48.66	+41.99
Regression Coef. for:									
Grade index	+.05	-.17	-.05	+.01	+.01	+.03	+.28	-.04	-.07
Staple length	-.42	+.80	+.43	-.10	-.09	-1.01	-2.92	-.82	-.63
Micronaire	+.72	-14.30	-5.24	-.81	-.61	+7.93	+6.44	-4.22	-2.60
Fiber str. (O gage)	-.08	+1.29	+.57	-.02	-.01	-.13	+.14	+.03	+.04
Uniformity ratio	-.27	+1.70	+.80	-.03	+.05	+1.21	+.17	+.16	.00
Standard Error (±)	1.50	4.56	1.96	.21	.20	8.25	6.64	2.64	2.38

*Statistically insignificant

Table 22.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 35 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Dependent variable	16.6	133	47	6.7	5.1	111	92	8.9	6.9
Grayness	2	2	2	2	2	2	2	2	2
Yellowness	3	3	3	3	3	3	3	3	3
Nonlint content (S.A.)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
2.5% span length	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Micronaire	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Standard Deviation (±) for:									
Dependent variable	1.85	13.3	5.7	.4	.3	9.2	7.7	3.0	2.6
Grayness	.7	.7	.7	.7	.7	.7	.7	.7	.7
Yellowness	.6	.6	.6	.6	.6	.6	.6	.6	.6
Nonlint content (S.A.)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
2.5% span length	.02	.02	.02	.02	.02	.02	.02	.02	.02
Micronaire	.39	.39	.39	.39	.39	.39	.39	.39	.39
Simple Correlation Coef. for:									
Grayness	+.10	-.38	-.37	-.32	-.34	+.01	+.04	-.02	+.01
Yellowness	+.40	-.51	-.51	+.07	-.08	+.19	+.15	-.23	-.04
Nonlint (S.A.)	+.33	-.52	-.55	+.31	+.07	+.22	+.04	+.10	-.01
2.5% span length	-.53	+.52	+.54	-.10	+.15	+.12	+.11	-.09	-.18
Micronaire	+.27	-.55	-.49	-.66	-.62	+.42	+.46	-.46	-.35
Multiple Cor. Data for:									
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS									
Multiple Cor. Coef.	.41	.56	.56	.37	.34	.19	.15	.23	.05
Partial Cor. Coef. for:									
Grayness	-.03	-.27	-.26	-.36	-.33	-.05	-.01	+.05	+.03
Yellowness	+.40	-.45	-.45	+.19	+.03	+.19	+.15	-.23	-.04
Beta Coefficients for:									
Grayness	-.03*	-.24*	-.23*	-.38*	-.35*	-.05*	-.01*	+.05*	+.03*
Yellowness	+.41*	-.44*	-.44*	+.19*	+.03*	+.20*	+.15*	-.24*	-.05*
Regression Equation:									
Constant (a)	+13.12	+169.59	+63.10	+6.74	+5.34	+103.51	+86.87	+11.87	+7.29
Regression Coef. for:									
Grayness	-.08	-4.92	-1.99	-.22	-.15	-.68	-.09	+.25	+.11
Yellowness	+1.38	-10.51	-4.56	+.13	+.01	+3.33	+2.15	-1.34	-.21
Standard Error (±)	1.69	10.99	4.73	.36	.26	9.03	7.61	2.97	2.61
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS NONLINT (S.A.)									
Multiple Cor. Coef.	.49	.68	.70	.52	.37	.28	.15	.27	.05
Partial Cor. Coef. for:									
Grayness	-.09	-.21	-.19	-.44	-.35	-.09	-.01	+.03	+.03
Yellowness	+.37	-.44	-.45	+.15	+.01	+.16	+.14	-.25	-.04
Nonlint (S.A.)	+.29	-.47	-.51	+.40	+.16	+.20	+.01	+.14	-.01
Beta Coefficients for:									
Grayness	-.08*	-.17*	-.15*	-.45*	-.38*	-.09*	-.01*	+.03*	+.03*
Yellowness	+.37*	-.38*	-.38*	+.13*	+.01*	+.17*	+.15*	-.26*	-.04*
Nonlint (S.A.)	+.28*	-.40*	-.44	+.39*	+.16*	+.21*	+.01*	+.15*	-.01*
Regression Equation:									
Constant (a)	+12.02	+180.92	+68.41	+6.42	+5.25	+99.44	+86.73	+10.91	+7.35
Regression Coef. for:									
Grayness	-.23	-3.39	-1.28	-.26	-.16	-1.23	-.11	+.12	+.12
Yellowness	+1.25	-9.11	-3.90	+.09	.00	+2.82	+2.13	-1.46	-.21
Nonlint (S.A.)	+.50	-5.17	-2.42	+.14	+.04	+1.86	+.06	+.43	-.03
Standard Error (±)	1.61	9.72	4.08	.33	.26	8.84	7.61	2.94	2.61

*Statistically insignificant

Table 22.--Continued

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Multiple Cor. Coef.	.62	.76	.78	.53	.44	.38	.23	.30	.22
Partial Cor. Coef. for:									
Grayness	-.03	-.32	-.31	-.44	-.37	-.11	-.02	+.04	+.05
Yellowness	+.29	-.36	-.37	+.16	+.08	+.23	+.19	-.28	-.10
Nonlint (S.A.)	+.19	-.39	-.44	+.40	+.23	+.27	+.06	+.10	-.07
2.5% span length	-.43	+.46	+.48	+.08	+.26	+.26	+.17	-.14	-.22
Beta Coefficients for:									
Grayness	-.02*	-.24*	-.22*	-.45*	-.39*	-.11*	-.03*	+.04*	+.05*
Yellowness	+.26*	-.28*	-.28*	+.16*	+.08*	+.25*	+.20*	-.31*	-.11*
Nonlint (S.A.)	+.16*	-.30*	-.33*	+.41*	+.23*	+.28*	+.06*	+.10*	-.08*
2.5% span length	-.41*	+.37*	+.38	+.08*	+.26*	+.28*	+.18*	-.15*	-.24*
Regression Equation:									
Constant (a)	+56.69	-104.28	-56.50	+4.67	+.99	-50.26	+4.07	+37.52	+43.72
Regression Coef. for:									
Grayness	-.07	-4.82	-1.92	-.26	-.16	-1.49	-.30	+.19	+.21
Yellowness	+.87	-6.68	-2.84	+.11	+.04	+4.09	+2.83	-1.68	-.51
Nonlint (S.A.)	+.29	-3.85	-1.84	+.15	+.06	+2.55	+.45	+.31	-.20
2.5% span length	-37.49	+240.06	+105.16	+1.46	+3.56	+125.22	+69.23	-22.29	-30.46
Standard Error (±)	1.45	8.63	3.58	.33	.25	8.52	7.50	2.91	2.55
DEPENDENT VARIABLE with GRAYNESS, YELLOWNESS, NONLINT (S.A.), 2.5% SPAN LENGTH, MICRONAIRE									
Multiple Cor. Coef.	.65	.87	.86	.79	.70	.63	.55	.54	.49
Partial Cor. Coef. for:									
Grayness	-.15	-.02	-.03	-.18	-.11	-.38	-.28	+.27	+.26
Yellowness	+.19	-.17	-.20	+.48	+.34	+.04	.00	-.12	+.07
Nonlint (S.A.)	+.26	-.62	-.62	+.30	+.07	+.46	+.23	-.04	-.21
2.5% span length	-.44	+.56	+.56	+.10	+.31	+.32	+.21	-.17	-.25
Micronaire	+.27	-.66	-.60	-.69	-.60	+.55	+.57	-.47	-.45
Beta Coefficients for:									
Grayness	-.14*	-.01*	-.02*	-.13*	-.10*	-.38*	-.29*	+.28*	+.28*
Yellowness	+.17*	-.10*	-.12*	+.40*	+.30*	+.04*	.00*	-.12*	+.07*
Nonlint (S.A.)	+.23*	-.43	-.45	+.22*	+.06*	+.45*	+.22*	-.04*	-.22*
2.5% span length	-.41*	+.36	+.37	+.07*	+.25*	+.29*	+.19*	-.16*	-.25*
Micronaire	+.27*	-.53	-.47	-.73	-.68	+.64	+.62	-.57*	-.54*
Regression Equation:									
Constant (a)	+52.26	-40.91	-32.53	+7.19	+2.68	-102.94	-39.04	+52.72	+56.43
Regression Coef. for:									
Grayness	-.39	-.21	-.18	-.08	-.04	-5.30	-3.43	+1.29	+1.13
Yellowness	+.57	-2.45	-1.24	+.28	+.15	+.58	-.04	-.67	+.33
Nonlint (S.A.)	+.42	-5.61	-2.51	+.08	+.02	+4.01	+1.65	-.11	-.55
2.5% span length	-37.14	+235.03	+103.26	+1.26	+3.43	+129.40	+72.65	-23.50	-31.47
Micronaire	+1.28	-18.34	-6.94	-.73	-.49	+15.24	+12.47	-4.40	-3.68
Standard Error (±)	1.40	6.51	2.86	.24	.20	7.10	6.44	2.57	2.28

*Statistically insignificant

Table 23.--Cotton: Results of multiple correlation analyses for the relationship of selected fiber test measurements with processing tests performed on 35 long staple samples, combed yarn, collected at triweekly intervals from selected gin points, crop of 1974

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
Mean Values for:	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
Dependent variable	16.6	133	47	6.7	5.1	111	92	8.9	6.9
2.5% span length	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
Micronaire	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Fiber str. (1/8" gage)	24	24	24	24	24	24	24	24	24
Uniformity ratio	44	44	44	44	44	44	44	44	44
Elongation (1/8" gage)	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Standard Deviation (±) for:									
Dependent variable	1.85	13.3	5.7	.4	.3	9.2	7.7	3.0	2.6
2.5% span length	.02	.02	.02	.02	.02	.02	.02	.02	.02
Micronaire	.39	.39	.39	.39	.39	.39	.39	.39	.39
Fiber str. (1/8" gage)	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Uniformity ratio	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Elongation (1/8" gage)	.67	.67	.67	.67	.67	.67	.67	.67	.67
Simple Correlation Coef. for:									
2.5% span length	-.53	+.52	+.54	-.10	+.15	+.12	+.11	-.09	-.18
Micronaire	+.27	-.55	-.49	-.66	-.62	+.42	+.46	-.46	-.35
Fiber str. (1/8" gage)	-.67	+.81	+.81	-.03	+.26	-.28	-.22	+.28	+.24
Uniformity ratio	-.41	+.49	+.53	-.48	-.12	+.14	+.18	-.12	-.16
Elongation (1/8" gage)	+.34	-.46	-.47	+.36	+.36	+.16	-.03	-.14	-.09
Multiple Cor. Data for:									
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE									
Multiple Cor. Coef.	.59	.75	.73	.67	.64	.44	.47	.47	.39
Partial Cor. Coef. for:									
2.5% span length	-.55	+.61	+.61	-.15	+.19	+.14	+.13	-.11	-.20
Micronaire	+.31	-.63	-.58	-.66	-.63	+.42	+.46	-.47	-.36
Beta Coefficients for:									
2.5% span length	-.53	+.51	+.53	-.11*	+.15*	+.13*	+.11*	-.10*	-.19*
Micronaire	+.26*	-.54	-.49	-.66	-.62	+.42*	+.46*	-.47*	-.35*
Regression Equation:									
Constant (a)	+66.83	-179.46	-95.53	+11.58	+4.54	+6.16	+7.36	+40.14	+43.62
Regression Coef. for:									
2.5% span length	-47.82	+333.57	+148.24	-2.06	+2.00	+57.12	+42.86	-14.73	-23.81
Micronaire	+1.26	-18.69	-7.23	-.66	-.45	+9.98	+9.13	-3.68	-2.37
Standard Error (±)	1.49	8.78	3.92	.28	.21	8.27	6.80	2.68	2.40
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE)									
Multiple Cor. Coef.	.71	.86	.85	.76	.65	.48	.48	.50	.45
Partial Cor. Coef. for:									
2.5% span length	-.32	+.38	+.38	+.16	+.25	+.24	+.16	-.18	-.30
Micronaire	+.03	-.43	-.34	-.76	-.62	+.28	+.37	-.35	-.20
Fiber str. (1/8" gage)	-.49	+.64	+.64	-.50	-.17	-.22	-.09	+.17	+.24
Beta Coefficients for:									
2.5% span length	-.28*	+.25*	+.25*	+.12*	+.23*	+.25*	+.16*	-.19*	-.33*
Micronaire	+.02*	-.29*	-.22*	-.89	-.70	+.30*	+.41*	-.38*	-.21*
Fiber str. (1/8" gage)	-.53	+.56	+.59	-.49	-.17*	-.26*	-.11*	+.19*	+.30*
Regression Equation:									
Constant (a)	+56.11	-96.64	-58.56	+9.49	+4.01	-20.50	-1.60	+46.71	+52.19
Regression Coef. for:									
2.5% span length	-25.34	+159.85	+70.69	+2.33	+3.11	+113.04	+61.66	-28.50	-41.80
Micronaire	+.12	-9.84	-3.28	-.88	-.51	+7.13	+8.17	-2.97	-1.45
Fiber str. (1/8" gage)	-.44	+3.41	+1.52	-.09	-.02	-1.10	-.37	+.27	+.35
Standard Error (±)	1.30	6.74	3.01	.25	.21	8.07	6.77	2.65	2.33

*Statistically insignificant

Table 23.--Continued

Statistical Items	Dependent Variables								
	Comber waste	Yarn skein strength		Yarn elongation		Yarn appearance		Yarn imperfections	
		22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex	22s or 27 tex	50s or 12 tex
	Pct.	Lbs.	Lbs.	Pct.	Pct.	Index	Index	No.	No.
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO									
Multiple Cor. Coef.....	.71	.88	.88	.81	.66	.49	.49	.50	.47
Partial Cor. Coef. for:									
2.5% span length.....	-.26	+.27	+.27	+.34	+.25	+.09	+.04	-.08	-.14
Micronaire.....	+.05	-.54	-.47	-.71	-.57	+.21	+.31	-.30	-.14
Fiber str. (1/8" gage).....	-.44	+.54	+.53	-.35	-.11	-.26	-.14	+.19	+.28
Uniformity ratio.....	-.05	+.37	+.40	-.40	-.10	+.14	+.13	-.09	-.14
Beta Coefficients for:									
2.5% span length.....	-.26*	+.17*	+.17*	+.29*	+.30*	+.12*	+.05*	-.11*	-.19*
Micronaire.....	+.04*	-.38	-.32*	-.76	-.67	+.24*	+.36*	-.34*	-.15*
Fiber str. (1/8" gage).....	-.50*	+.44	+.45	-.33*	-.12*	-.34*	-.18*	+.24*	+.38*
Uniformity ratio.....	-.04*	+.25*	+.28*	-.34*	-.10*	+.16*	+.15*	-.10*	-.16*
Regression Equation:									
Constant (a).....	+55.50	-105.74	-63.33	+8.53	+3.41	+16.66	+23.88	+39.67	+41.23
Regression Coef. for:									
2.5% span length.....	-23.36	+109.16	+46.66	+5.45	+4.11	+54.19	+19.69	-17.03	-24.73
Micronaire.....	+.20	-12.98	-4.79	-.76	-.48	+5.70	+7.10	-2.69	-1.05
Fiber str. (1/8" gage).....	-.42	+2.67	+1.17	-.06	-.02	-1.43	-.62	+.34	+.45
Uniformity ratio.....	-.06	+2.24	+1.07	-.09	-.02	+1.02	+.76	-.21	-.29
Standard Error (±).....	1.29	6.25	2.75	.23	.21	7.99	6.72	2.64	2.30
DEPENDENT VARIABLE with 2.5% SPAN LENGTH, MICRONAIRE, FIBER STR. (1/8" GAGE), UNIFORMITY RATIO, ELONGATION (1/8" GAGE)									
Multiple Cor. Coef.....	.71	.88	.88	.84	.82	.50	.50	.50	.47
Partial Cor. Coef. for:									
2.5% span length.....	-.25	+.28	+.28	+.28	+.15	+.07	+.07	-.07	-.14
Micronaire.....	+.04	-.54	-.47	-.72	-.61	+.22	+.29	-.30	-.13
Fiber str. (1/8" gage).....	-.41	+.46	+.46	-.14	+.28	-.20	-.19	+.14	+.26
Uniformity ratio.....	-.06	+.36	+.39	-.37	+.01	+.15	+.10	-.09	-.13
Elongation (1/8" gage).....	-.05	-.08	-.07	+.39	+.65	+.06	-.14	-.04	+.04
Beta Coefficients for:									
2.5% span length.....	-.25*	+.18*	+.18*	+.22*	+.13*	+.10*	+.09*	-.10*	-.21*
Micronaire.....	+.03*	-.38	-.33*	-.72	-.57	+.25*	+.33*	-.35*	-.15*
Fiber str. (1/8" gage).....	-.53*	+.41	+.42*	-.14*	+.28*	-.30*	-.28*	+.21*	+.41*
Uniformity ratio.....	-.05*	+.24*	+.27*	-.29*	+.01*	+.18*	+.12*	-.11*	-.16*
Elongation (1/8" gage).....	-.04*	-.05*	-.05*	-.30*	+.62	+.07*	-.15*	-.05*	+.04*
Regression Equation:									
Constant (a).....	+56.31	-97.79	-60.23	+7.36	+2.04	+11.89	+33.02	+40.74	+40.43
Regression Coef. for:									
2.5% span length.....	-22.49	+115.64	+49.16	+4.17	+1.80	+45.38	+35.49	-15.16	-26.25
Micronaire.....	+.17	-13.24	-4.89	-.71	-.41	+5.96	+6.63	-2.74	-1.00
Fiber str. (1/8" gage).....	-.45	+2.47	+1.09	-.02	+.04	-1.24	-.97	+.30	+.48
Uniformity ratio.....	-.06	+2.16	+1.05	-.07	.00	+1.09	+.63	-.22	-.28
Elongation (1/8" gage).....	-.12	-.99	-.39	+.17	+.26	+.96	-1.76	-.21	+.16
Standard Error (±).....	1.29	6.22	2.74	.21	.16	7.97	6.65	2.64	2.30

*Statistically insignificant

MEASURES USED IN STATISTICAL ANALYSIS

Some of the statistical concepts used in this study may be unfamiliar to many who will find the information in this report useful. Results reported in this study include the means, standard deviations, simple and multiple correlation coefficients, beta values, partial correlation coefficients and regression equations for each cotton quality measurement. Formulas of each of these results may be found in any good textbook on statistical correlation. However, for those not familiar with these concepts the following common language explanation is given for each item as it is used in this report:

(1) Mean Value is the simple arithmetical average of each measured property for the spinning lots included in the study.

(2) Standard deviation is a measure of dispersion around the mean value, expressed in the same terms as the variable. For a normal distribution, approximately 68 percent of the values will be within plus or minus one standard deviation of the mean, 95 percent within plus or minus two standard deviations, and nearly all values will be within plus or minus three standard deviations.

Example: (from Table 15, column 1, page 79)

The mean or average value for picker and card waste, the dependent variable is 6.3 percent and the standard deviation is .95 percent. This indicates that 68 percent of the lots tested in the medium staple group should contain between 5.4 and 7.2 percent waste (6.3 ± .95). Ninety five percent of the lots tested would have from 4.4 to 8.2 percent waste (6.3 ± 1.90) and nearly all of the test lots would show waste values between 3.4 and 9.2 percent (6.3 ± 2.85).

(3) Simple correlation coefficient (r) is a measure of the linear relationship between two variables, ie. how one variable is associated with the other. A correlation coefficient of 0 indicates no relationship, and 1.0 indicates a perfect relationship. A plus sign before the correlation coefficient indicates that the values for both variables change in the same direction, whereas a minus sign indicates that they change in opposite directions.

Example: (from Table 15, column 1, page 79)

The simple correlation coefficient (r) of grade index with picker and card waste is -.63. This indicates that grade index and picker and card waste are related. It further indicates by the - sign that as one goes up or down the other goes in the opposite direction.

(4) Multiple correlation coefficient (R) is a measure of the linear relationship between one dependent variable and two or more independent variables. It has no plus or minus sign because one independent variable may contribute positively, and another negatively, in explaining the variation in the dependent variable. The multiple R may fall between 0 and 1.0, with 0 indicating no relationship and 1.0 a perfect relationship.

Example: (from Table 15, column 1, page 79)
The multiple R for the dependent variable of picker and card waste with independent variables of grade index, staple length and micronaire is .65. This indicates that the combination of grade index, staple length and micronaire shows a definite relationship to picker and card waste. It does not explain, however, whether grade index, staple length and micronaire contribute postively or negatively to picker and card waste or which of the three is most important.

(5) Although the coefficient of determination (R^2, or r^2) is not given, it may be easily obtained by squaring the simple r's or multiple R's and multiplying by 100. This gives the percentage of variation explained, a measure of the amount of variation in the dependent variable which is explained by variation in the independent variables.

Example:
The multiple R in the example above is .65. When squared and multiplied by 100 the result is 42.2. This means that 42.2 percent of the variation in picker and card waste is explained by grade index, staple length and micronaire. The remaining 57.8 percent of the variation is unexplained.

(6) Partial correlation coefficient (r) in a multiple analysis is similar to a simple correlation coefficient. The simple r indicates the statistical relationship between two variables without any control of other variables. In a multiple analysis, the partial correlation coefficient is one measure of the net relationship between one independent variable and the dependent variable while the influence of the other independent variables are statistically removed.

Example: (from Table 15, column 1, page 79)
The partial correlation coefficients (r) for picker and card waste with grade index, staple length and micronaire are: -.60 for grade index, -.16 for staple length and -.02 for micronaire. This shows that picker and card waste is related to grade index and that when one goes up or down the other goes in the opposite direction. It further shows that staple length and micronaire have less affect on picker and card waste than grade index since the values for these two variables are much smaller.

(7) Beta coefficients (B) in a multiple correlation are sometimes preferred over use of partial r's. A Beta coefficient is another measure of the relative importance of a variable in a multiple correlation, with the influence of the other variables removed. Quite often, only one of these measures (Beta or partial r) is used for interpretation; both are included in this report. An asterisk beside the Beta value indicates that the result is statistically insignificant (less than three times its standard error).

Example:
The Beta (B) coefficients in the above example are -.60 for grade index, -.12* for staple length and -.02* for micronaire. This shows the same relative results as the partial correlation coefficients (r) and the * further indicates that the -.12 Beta value for staple length and -.02 for micronaire are statistically insignificant.

(8) Regression equation or estimating equation is used to predict changes in the dependent variable which will result from changes in the independent variable or variables. It is written:

$$Y = a + b_1X_1 + b_2X_2 + \ldots b_NX_N$$

where Y is the dependent variable and the X's are independent variables.

The constant "a" indicates the starting point or height of the regression line when it is to be plotted on a graph or to be used in calculating changes in the dependent variable. The regression coefficient "b" indicates the change in the dependent variable that is associated with each unit change in the independent variable. The spread or scatter of the data around the regression line is measured by the standard error. The standard error has the same relationship to the regression line as the standard deviation has to the mean value. (see paragraph (2) above)

Example: (from Table 15, column 1, page 79)

Regression equation for picker and card waste:

Constant (a)	+22.29
Regression coefficients (b)	
Grade index	-.12
Staple length	-.14
Micronaire	-.03
Standard error	±.72

With regression coefficients (b) of -.12 for grade index, -.14 for staple length and -.03 for micronaire reading the following average conditions should exist:

1. With any unit change in grade index, picker and card waste percentage should change .12 in the opposite direction.

2. With any unit change (32nd) in staple length, picker and card waste percentage should change .14 in the opposite direction.

3. With any unit change (1.0) in micronaire reading, picker and card waste percentage should change .03 in the opposite direction.

Expressing this equation algebraically we have:

Estimated picker and card waste (percent) =
22.29 - .12 (grade index) -.14 (staple length) -.03 (micronaire)

Thus if we wished to predict the amount of picker and card waste from a bale of cotton of Strict Low Middling (94 index), a staple length of 1-3/32 inches (35 32ds) and a micronaire of 4.5, the equation would be:

$$\text{Estimated picker and card waste} = 22.29 - .12(94) - .14(35) - .03(4.5)$$

$$\text{Estimated picker and card waste} = 5.98\%$$

The standard error of the equation of ±.72 indicates that actual picker and card waste obtained from this kind of cotton would be within plus or minus .72 percent (between 5.26 and 6.70) 68 times in 100.

A check on the accuracy of this figure can be made from the average results for SLM grade, 1-3/32 inch staple, in Table 3 for the different Areas.

Regression equations are given in the tables for multiple relationships only. Equations for simple relationships may be calculated by using the formula:

$$Y = a + bX$$

$$\text{where } a = \text{Mean } Y - b(\text{Mean } X)$$

$$b = r \frac{\text{Std. Dev. } Y}{\text{Std. Dev. } X}$$

INTERPRETING STATISTICAL DATA

In referring to the data presented in the tables of this report, it is well to keep in mind several factors which influence the results and could lead to erroneous conclusions.

Correlation values are significantly influenced by the specific variables included, and by their number. This is due to the interrelationships of fiber properties. As interrelated properties are added to a correlation, the specific contribution of a given property may decrease sharply while at the same time the overall correlation will increase. For example, a correlation of staple length with yarn strength usually shows a good relationship, with a large amount of the variation in yarn strength explainable by differences in staple length. But, as other measures are taken into consideration, particularly fiber strength at 1/8-inch gage, the importance of staple length in explaining the total variation in yarn strength decreases rather sharply, even though the total variation explained is increased. This situation occurs because fiber strength is more closely related to yarn strength than is staple length. Yet, when fiber strength is not included in the correlation, some of the effects of strength are evidenced through the interrelation of strength and staple length.

Perhaps the most important fact to be kept in mind is that the use of only one statistic, such as a multiple R, a partial r, or a Beta value, can lead to erroneous conclusions. In order to determine the importance of any variable, all of the statistical items for each study should be considered.

BASIS FOR INTERPRETATION OF TEST RESULTS

The following explanation of the data published in Tables 1 through 8 of this report may be helpful in the interpretation of test results:

Classification

Classification was made in accordance with the official Cotton Standards for grade and staple length. These results are presented under the usual terms for the individual lots but the grade values were converted to an index for averaging in the summary tables.

Grade index, as reported in the summary tables is designed to reflect differences in market value and provides a method for averaging the grade for a number of individual lots. Middling grade is used as the basis of 100, and higher or lower index numbers reflect higher or lower average market values, respectively. Index values for white, spotted, tinged and gray grades of upland cotton are shown below:

Grade Name	Code	Grade Index: Plus (0)	White (1)	Light Spotted (2)	Spotted (3)	Tinged (4)	Light Gray (5)	Gray (6)
Good Middling	(1)		105	103	101	94	99	93
Strict Middling	(2)		104	102	99	91	98	91
Middling	(3)	102	100	97	93	82	92	84
Strict Low Middling	(4)	97	94	89	83	75	85	75
Low Middling	(5)	90	85	80	75	68		
Strict Good Ordinary	(6)	81	76					
Good Ordinary	(7)	73	70					
Below Grade	(8)		60					

The grade of cotton is obtained by evaluating color, leaf and preparation in relation to the official standards. Grade provides an indication of fiber color and the waste content of a sample of cotton. Experience has shown the average relationship between picker and card waste and various grades of upland cotton to be approximately as given in the tabulation shown in the

subsequent section on manufacturing waste. In comparing these average grade figures with the picker and card waste data, it should be understood that variations from the averages for individual samples are attributable to the nature of the extraneous material present in the cotton, the characteristics of the fiber, and whether the grade designation was low because of poor color.

Staple length is the length of a typical portion of the fibers in the samples as determined by the classer in comparison with official standards. Uniformity of fiber length, as well as other fiber properties, influence to some extent the classer's selection of the typical portion of the fibers on which the staple length designation is based. In general, there is a fairly close relationship between the staple length as designated by the classer and the fineness and strength of the yarn that can be manufactured from the cotton. These relationships, however, are also influenced by other fiber properties, the measurements of which will be discussed in the paragraphs which follow.

Fiber Tests

Fiber length data were obtained by the Digital Fibrograph method for the short, medium and long staple American upland samples and by the array method for the extra long American Pima and upland samples. Briefly, the Digital Fibrograph method consists of placing representative specimens of cotton weighing approximately 30 centigrams at random on a pair of combs, parallelizing the beards of cotton extending from one side of the combs, and scanning these beards photoelectrically on the instrument at 3 length intervals beginning at 0.15 inch from the teeth of the combs and ending near the outer fringe. The 2.5 percent span length and the 50/2.5 uniformity ratio values reported for each lot are based on five specimens tested by each of two technicians.

The Digital Fibrograph 2.5 percent span length values reported indicate the length which will be spanned by 2.5 percent of the fibers when they are parallel and randomly distributed. It is also the length where the amount of fibers indicated by the instrument is 2.5 percent of the amount at the starting point of 0.15 inch. The Digital Fibrograph 2.5 percent span length values are closely related to staple length designations.

The Digital Fibrograph 50/2.5 uniformity ratio values reported indicate the relative uniformity of fiber length in the samples. They represent the ratios between the 50 percent span length and the 2.5 percent span length, expressed as percentages. Larger values indicate more uniform fiber length distribution. Unusually low fiber length uniformity tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product. The following adjective descriptions will serve to classify cottons from the standpoint of 2.5 percent span length and fiber length uniformity:

2.5 percent span length		50/2.5 uniformity ratio	
Below 1.00	Short	Below 42	Very low
1.00 - 1.14	Medium	42 - 43	Low
1.15 - 1.29	Long	44 - 45	Average
Above 1.29	Extra-long	46 - 47	High
		Above 47	Very high

Data source - 1575 American upland lots tested from the crops of 1966-68.

Array tests for the extra long staple American Pima and upland samples were performed on the Suter-Webb fiber sorter. Briefly, this method consists of parallelizing the fibers in a representative 75-milligram specimen of cotton through a series of combs, separating the fibers into length groups at 1/8-inch intervals, and weighing the fibers in each length group. The upper quartile length and coefficient of variation values reported are based on one specimen tested by each of two technicians.

The array upper quartile length values reported indicate the length which is exceeded by 25 percent of the weight of the fibers in the samples. They are closely related to and longer than both the Fibrograph and the classer's staple designations. This relationship may vary, however, because the methods measure different fiber length characteristics.

The array coefficient of length variation values reported indicate the relative variability of fiber length in the samples. They represent the standard deviation of the weight-length frequencies expressed as a percentage of the mean length. Smaller values indicate more uniform fiber length distributions. Excessive fiber length variation tends to increase manufacturing waste, to make processing more difficult, and to lower the quality of the product. It is, therefore, considered desirable for a cotton to have a low coefficient of variation. The following adjective descriptions will serve to classify cottons from the standpoint of upper quartile length and fiber length variation:

Upper Quartile Length		Coefficient of Fiber Length Variation	
Below 1.10	Short	Below 26	Very low variation
1.10 - 1.24	Medium	26 - 29	Low variation
1.25 - 1.39	Long	30 - 33	Average variation
Above 1.39	Extra Long	34 - 37	High variation
		Above 37	Very high variation

Data source - 830 American upland lots tested from the crops of 1958-60 (more recent data not available).

Fiber fineness and maturity in combination were determined by the micronaire test. This is an instrument test which measures the resistance of a plug of cotton to air flow. A representative standard weight of cotton fibers is placed in the instrument specimen holder and compressed to a fixed

volume. Air at a known pressure is forced through the specimen and the amount of flow is indicated by a direct reading scale. Readings obtained are relative measures of either the weight per unit length, or the cross sectional size of the fibers. Because the instrument measures may differ from the actual weight per inch, depending upon the fiber characteristics of the sample, the results are reported in terms of "micronaire reading" instead of micrograms per inch. These readings are taken from the curvilinear scale adopted in 1950, and now in international use. Fiber fineness contributes to yarn strength, particularly when fine numbers are spun, but it also tends to increase neppiness and to require a reduced rate of processing.

Fiber maturity, also an important factor affecting the appearance of yarns and fabrics, is a desirable characteristic from the standpoint of low picker and card waste. Immature fibers are susceptible to the formation of neps, and contribute to lower yarn appearance grades. The desirability of micronaire reading, therefore, depends on the specific end product or use of the cotton.

Several instruments, including the Micronaire, Fibronaire, and Port-Ar, may be used for these tests. All instruments now use the same scale and report results in the same terms, i.e. "micronaire reading". The micronaire reading is now a part of the official standards for upland cotton along with grade and staple length.

Fiber strength is an important factor in determining yarn strength. Cottons with good fiber strength usually give less trouble in the manufacturing processes than the weak fibered cottons. Tests for fiber strength were made without a space between the clamp jaws (0 gage) using the Pressley flat bundle tester, and with a 1/8-inch spacer between the clamp jaws (1/8-inch gage) using the Stelometer. Strength results from both the Pressley and the Stelometer were controlled at the same level by use of standard calibration cottons. Use of the Stelometer also provides a measure of fiber elongation. Comparative tests have shown that the results of the 1/8-inch gage tests are more highly correlated with yarn strength than the results of the zero gage tests. Results for both methods are reported, however, because the zero gage tests are widely used by the cotton industry.

The results for the Pressley zero gage test are reported in terms of thousand pounds per square inch, as calculated by the use of Formula 1. These results may be converted to other methods of expressing fiber strength by use of Formulas 2, 3, and 4:

(1) Thousand pounds per square inch (Mpsi) =

$$\frac{\text{breaking load in lb} \times 10.81}{\text{bundle weight in mg}}$$

(2) Grams per tex (gm/tex) = Mpsi x 0.496

(3) Strength-weight ratio = Mpsi ÷ 10.81

(4) Strength-weight ratio = gm/tex ÷ 5.36

The results of the 1/8-inch gage tests are reported in terms of grams per tex in accordance with the recommendations of the American Society for Testing and Materials (ASTM), and the International Standards Organization (ISO). A tex unit is equal to the weight in grams of 1000 meters of the material. There is a correlation between the 1/8-inch gage strength test results and fiber length. Cottons with short lengths tend to have lower average strength values than long staple cottons. Results for 1/8-inch gage tests are calculated by use of Formula 5. Stelometer results are adjusted to Pressley level by use of calibration cottons.

$$(5)\quad \text{Grams per tex} = \frac{\text{breaking load (kg) x 15}}{\text{bundle weight in mg}}$$

The following descriptive terms may be applied to the data shown in this report:

Staple length group and descriptive designation	Zero gage strength (thousand psi)	1/8-inch gage strength (grams per tex)
Short staple:		
Low	70 - 75	18 - 19
Average	76 - 81	20 - 21
High	82 - 87	22 - 23
Medium staple:		
Low	74 - 80	20 - 21
Average	81 - 87	22 - 23
High	88 - 94	24 - 25
Long staple:		
Low	85 - 88	23 - 24
Average	89 - 92	25 - 26
High	93 - 96	27 - 28
Extra-long staple:		
Low	93 - 96	31 - 32
Average	97 - 100	33 - 34
High	101 - 104	35 - 36

Data source - 291 short staple, 1206 medium staple, 78 long staple, and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Fiber elongation results were obtained in connection with the 1/8-inch gage fiber strength tests by using the Stelometer instrument. The following adjective ratings will assist in the interpretation of the fiber elongation results reported:

Descriptive designation	Fiber elongation (percent)
Very low	5.3 and below
Low	5.4 - 6.2
Average	6.3 - 7.1
High	7.2 - 8.0
Very high	8.1 and above

Data source - 1575 American upland lots tested from the crops of 1966 - 68.

Color measurements were made on samples of raw stock from each lot by using the Nickerson-Hunter Colorimeter. The basic color values reported are in terms of grayness and yellowness scales designed especially for cotton. The grayness scale ranges from 0 for the brightest samples (no gray) through 9 for the darkest color. The yellowness scale ranges from 0 for the lightest color (no yellow) to 9 for the yellowest color. In other words, the larger the number reported the darker or yellower the cotton becomes. The relationship of these new cotton color scales to Rd and +b values and to the color of the Universal Grade Standards for upland cotton is shown in Figure 2 and for American Pima cotton in Figure 3.

The color of raw cotton is also reported as a single index number. The relationship of the index number to Rd and +b and the color of the Universal Grade Standards for upland cotton is shown in Figure 4.

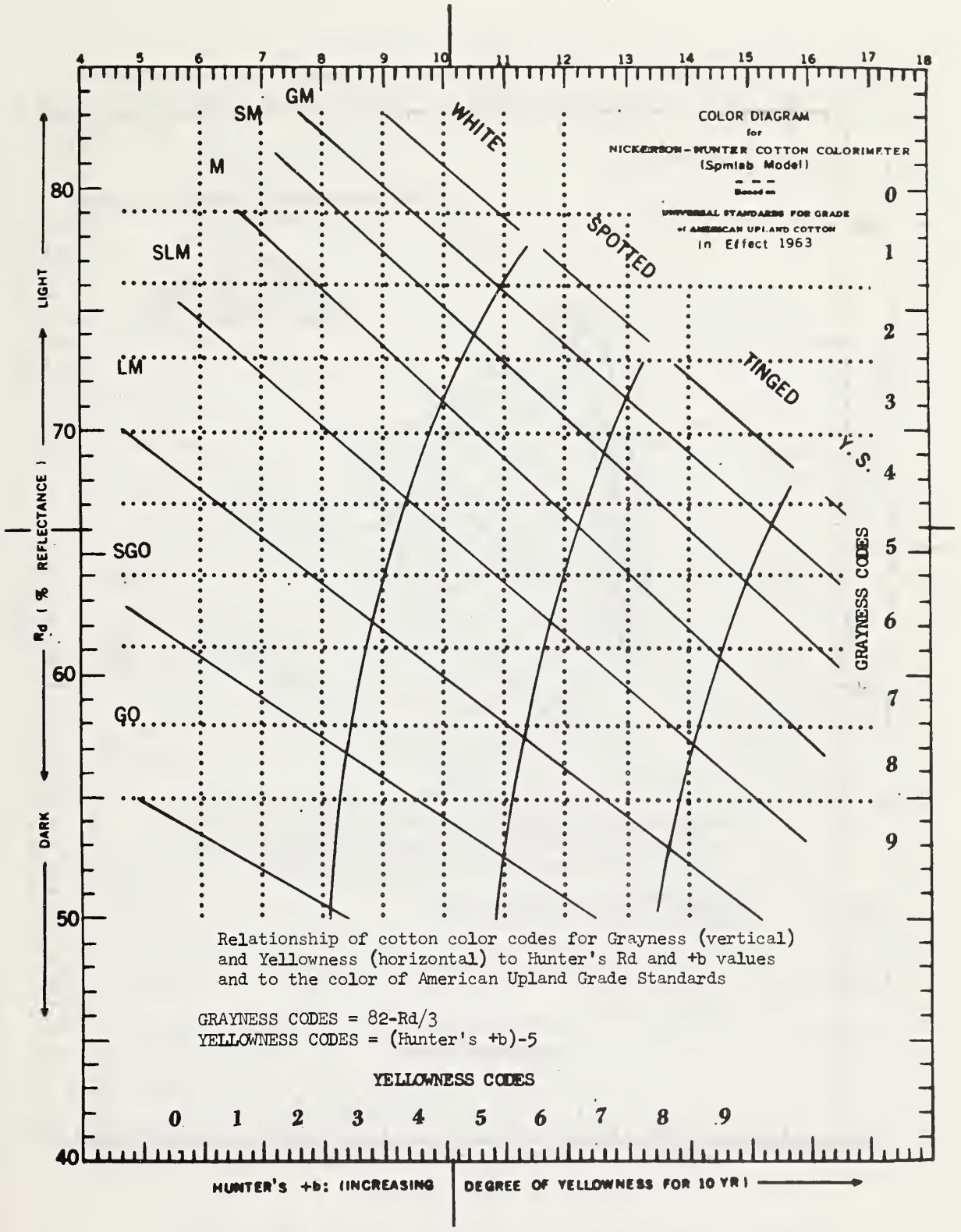

Fig. 2--Colorimeter diagram for upland cotton

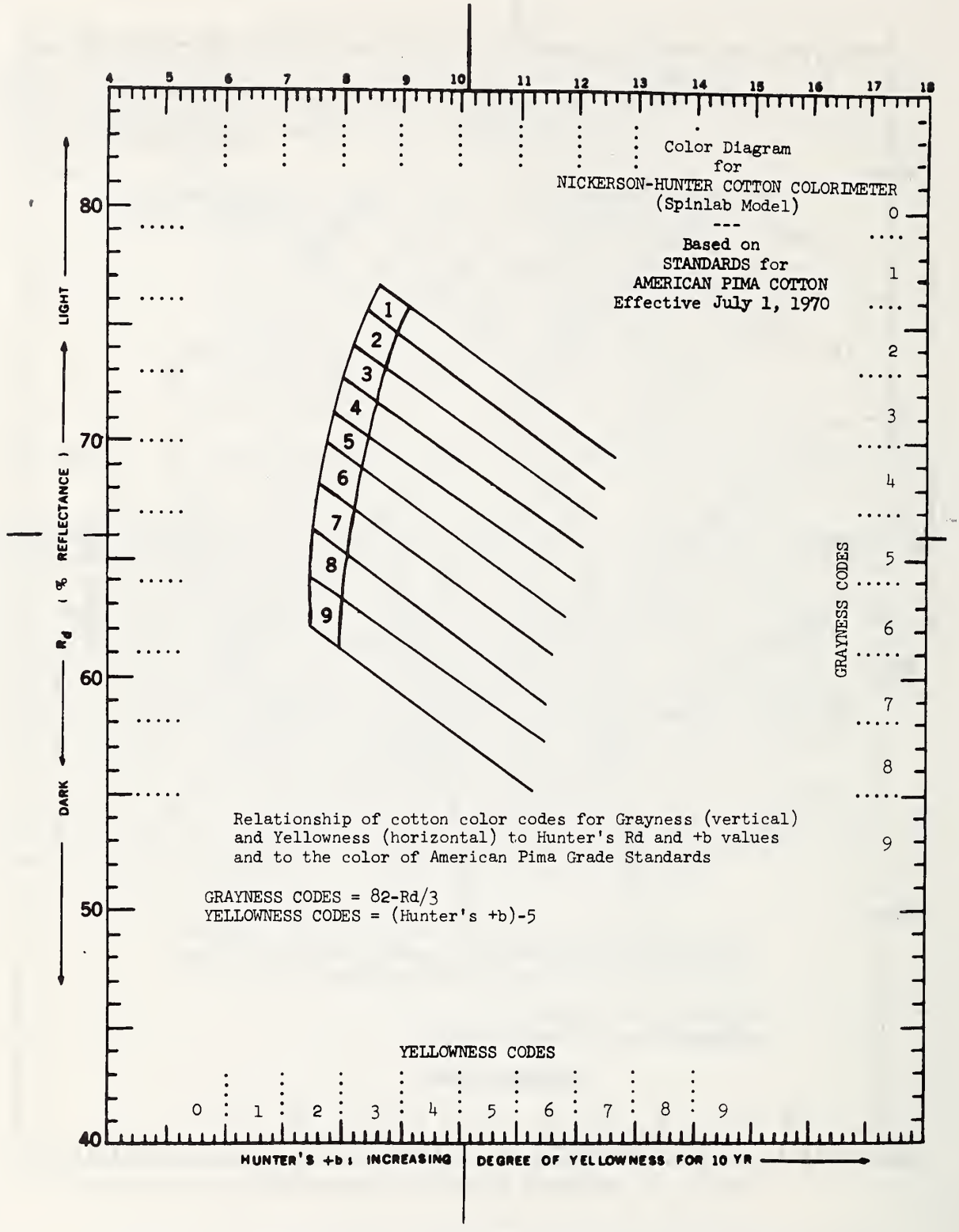

Figure 3.--Colorimeter diagram for American Pima cotton.

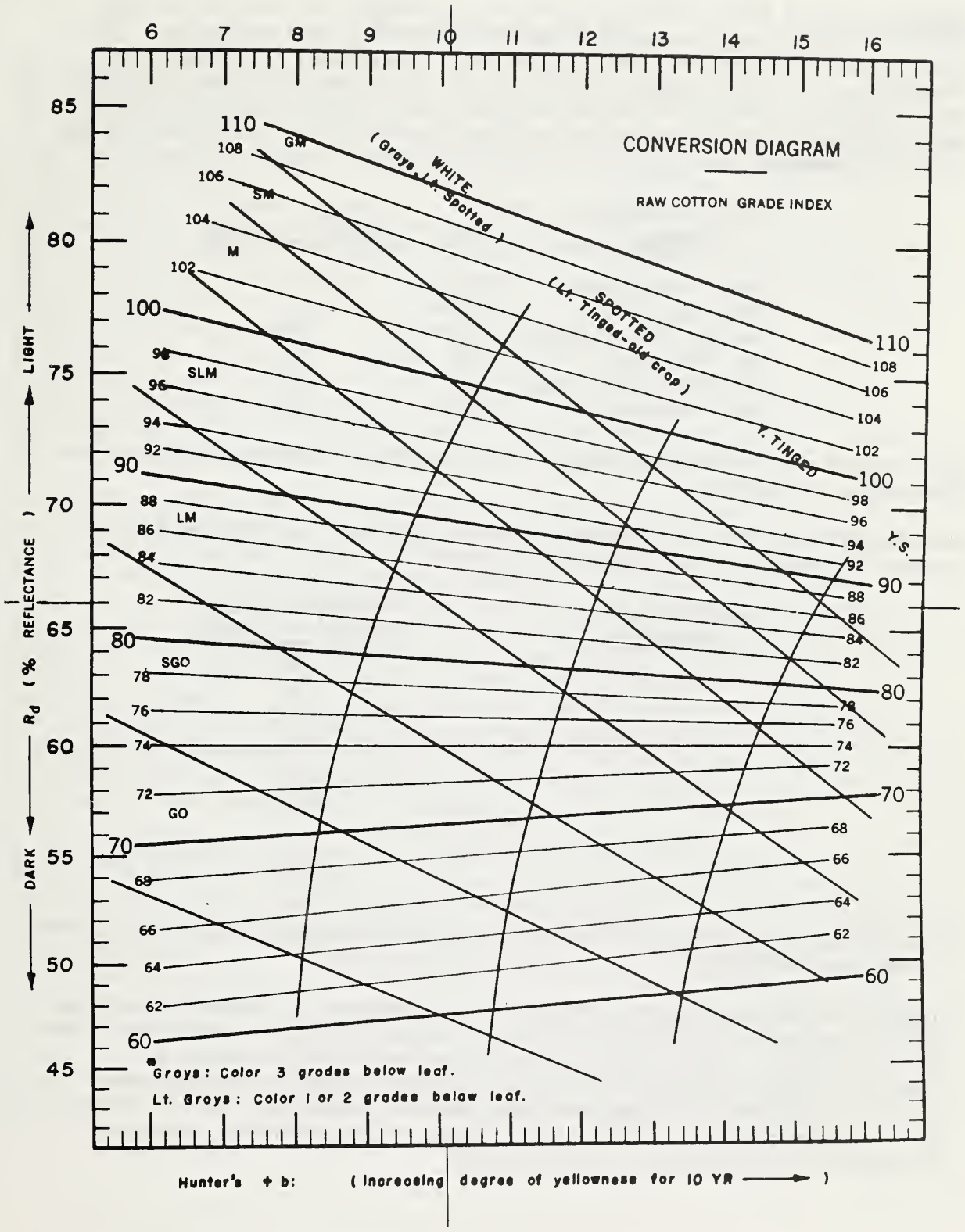

Fig. 4--Conversion diagram for converting raw cotton color to color index

Nonlint content for the various lots was determined by the use of the Shirley Analyzer which separates the lint from the foreign matter. The total nonlint values reported include both visible and invisible loss. These results are distinguished from total picker and card waste in that practically no fiber is included, whereas textile mill wastes include appreciable amounts of fiber. Tests performed in previous years show the following average relationship of Shirley Analyzer nonlint to grade:

American upland grade	Code	Average nonlint content (percent)
Strict Middling	(21)	1.7
Middling	(31)	2.2
Strict Low Middling	(41)	2.9
Low Middling	(51)	3.9
Strict Good Ordinary	(61)	5.3
Good Ordinary	(71)	6.9

Data source - 5725 American Upland Color and Trash Survey samples tested from crops of 1968-72.

The following scale has been developed to represent the average nonlint content for grades of American Pima cotton:

American Pima grade	Average nonlint content (percent)
1	2.0
2	2.3
3	2.6
4	3.3
5	4.1
6	5.3
7	7.0
8	8.5
9	9.9

Data source - 935 American Pima Color and Trash Survey samples tested from the crops of 1968-72.

Differences between results obtained for individual lots and the average percentages shown for the grades may be caused by: (1) Grade is a combination of color, leaf and preparation; any one of which may be the limiting factor, (2) there is a range of trash allowable within each specific grade and (3) these data are based on weight and do not take into consideration the nature of the trash, which may be as important as weight in determining the final grade.

Yarn Processing Tests

The results of yarn processing tests reported in this summary were obtained by procedures adopted in 1962 which include heavier weights for laps, slivers and rovings than those used in previous years. These procedures also include spinning from single roving instead of double roving for the two standard yarn numbers and the spinning of a third yarn number on all the samples to provide a small-scale measure of spinning end-breakage or spinning performance. In 1965, metallic card clothing was installed on the carding machines to replace the conventional fillet clothing used previously, and in 1966, crusher rolls were installed on the card machines. These changes reflect similar changes that have taken place in the cotton textile industry including increased emphasis on running quality since the Mid-1940's when long-draft systems were adopted for both the roving and spinning processes in the routine laboratory spinning test procedures. These changes were designed to bring the laboratory processing procedures more in line with current textile mill practices and thus make the processing evaluations more applicable to present day mill operations.

The card production rate employed and the yarn numbers spun for each cotton were selected on the basis of the staple length expected in the specified area of growth as described in the earlier section on test procedures. Four different length groupings were used to cover the range of cottons grown in this country and to approach commercial practices in processing these cottons. The spinning twist multipliers were selected to provide maximum yarn strength on the basis of staple length. Details of the spinning test procedures are shown at the end of this section of the report (Table 24). Results of previous tests show that decreasing the card production rate results in fewer neps, improved yarn appearance grades, and removal of more waste at the card. Results of tests on the various lots should therefore be compared directly for only those lots in the same length group which were processed in a comparable manner.

Manufacturing waste reported for a sample of cotton is important because excessive waste increases the cost of cotton products. The percentage of waste extracted by the picking and carding processes in performing a spinning test provides a measure of manufacturing waste. There is an average relationship between this waste and grade as discussed in the previous section on the grade of cotton. The rate at which the cotton is carded, however, affects the picker and card waste values because the more thorough carding action obtained when the carding rate is decreased extracts a larger quantity of waste. The longer staple cottons are generally carded at a lower rate than the shorter cottons in order to obtain acceptable yarn quality. Tests performed in recent years show the following average relationship of picker and card waste to grade:

American upland grade	Code	Average picker and card waste (percent)	American Pima	Average picker and card waste (percent)
Strict Middling	(21)	4.7	1	7.5
Middling	(31)	5.1	2	7.9
Strict Low Middling	(41)	5.7	3	8.4
Low Middling	(51)	6.7	4	9.5
Strict Good Ordinary	(61)	7.8	5	10.8
Good Ordinary	(71)	8.9	6	11.7
			7	13.7
			8	15.2
			9	17.5

Data source - 5561 samples of American upland cotton and 431 samples of American Pima cotton tested for Shirley Analyzer nonlint content from the crops of 1966-68 and picker and card waste calculated from its relationship to Shirley Analyzer nonlint content.

The percentage of waste removed by the comber is reported in addition to the picker and card waste for cottons processed into combed yarn. The shorter staple cottons are processed through the comber with a closer setting than for the longer staple cottons because smaller comber waste percentages are usually extracted from this cotton in commercial practice.

Yarn strength is perhaps the most important and reliable test of yarn quality. Yarn strength not only determines the range of the usefulness of a given cotton, but is also an indication of spinning and weaving performance. The yarn strength test is performed on 120 yard skeins (80 turns on a 1.5 yard reel). Results reported are based on the average of 25 skeins for each yarn number. Yarn strength is reported in terms of skein strength since studies have shown that such strength values are more closely related to fabric strength as well as to fiber properties than single strand yarn strength. Skein strength data for the two numbers spun are reported for each lot. Length, strength and fineness influence yarn strength more than other fiber properties.

The following descriptive terms may be of help in determining the relative level of yarn strength in their report:

Kind of yarn, staple length group and description	Yarn skein strength in pounds for the specified yarn numbers	
Carded yarns:		
Short staple group:	8s	22s
Low	265 - 290	78 - 86
Average	291 - 316	87 - 95
High	317 - 342	96 - 104
Medium staple group:	22s	50s
Low	95 - 104	30 - 35
Average	105 - 114	36 - 41
High	115 - 125	42 - 47
Long staple group:	22s	50s
Low	125 - 131	45 - 48
Average	132 - 138	49 - 52
High	139 - 145	53 - 56
Combed yarns:		
Long staple group:	22s	50s
Low	142 - 149	52 - 55
Average	150 - 157	56 - 59
High	158 - 165	60 - 63
Extra-long staple group:	50s	80s
Low	66 - 68	36 - 37
Average	69 - 71	38 - 39
High	72 - 74	40 - 41

Data source - 291 short staple, 1206 medium staple, 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Yarn elongation results were obtained in connection with yarn skein strength tests. Elongation in the yarn is highly correlated with fiber elongation. Yarns with high elongation give less end breakage in weaving than yarns with low elongation.

The following descriptive terms may be of some help in determining the relative levels of yarn elongation:

Kind of yarn, staple length group, and description	Yarn elongation in percent for the specified yarn numbers	
Carded yarns:		
Short staple group:	8s	22s
Low	6.5 - 7.3	5.5 - 6.2
Average	7.4 - 8.1	6.3 - 7.0
High	8.2 - 9.0	7.1 - 7.8
Medium staple group:	22s	50s
Low	5.4 - 5.9	4.0 - 4.5
Average	6.0 - 6.5	4.6 - 5.1
High	6.6 - 7.1	5.2 - 5.7
Long staple group:	22s	50s
Low	6.2 - 6.5	5.2 - 5.4
Average	6.6 - 6.9	5.5 - 5.7
High	7.0 - 7.3	5.8 - 6.0
Combed yarns:		
Long staple group:	22s	50s
Low	6.6 - 6.9	5.5 - 5.7
Average	7.0 - 7.3	5.8 - 6.0
High	7.4 - 7.7	6.1 - 6.3
Extra-long staple group:	50s	80s
Low	5.6 - 5.8	4.6 - 4.8
Average	5.9 - 6.1	4.9 - 5.1
High	6.2 - 6.4	5.2 - 5.4

Data source - 291 short staple, 1206 medium staple and 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Yarn Appearance refers to the relative evenness, smoothness and freedom from foreign material of the yarn as evaluated by a visual comparison of the yarn with the latest standards adopted by the American Society for Testing and Materials. Since appearance is very important in many types of cotton products, high yarn appearance grades are desirable. The following descriptive terms may be of help in determining the relative levels of yarn appearance in this report.

Kind of yarn, staple length group, and description	Yarn appearance index for the specified yarn numbers	
Carded yarns:		
Short staple group:	8s	22s
Low	105 - 113	92 - 104
Average	114 - 122	105 - 117
High	123 - 130	118 - 130
Medium staple group:	22s	50s
Low	93 - 105	77 - 87
Average	106 - 118	88 - 98
High	119 - 130	99 - 109
Long staple group:	22s	50s
Low	71 - 86	65 - 78
Average	87 - 102	79 - 92
High	103 - 118	93 - 106
Combed yarns:		
Long staple group:	22s	50s
Low	81 - 97	70 - 85
Average	98 - 114	86 - 101
High	115 - 130	102 - 117
Extra-long staple group:	50s	80s
Low	102 - 111	98 - 106
Average	112 - 121	107 - 115
High	122 - 130	116 - 124

Data source - 291 short staple, 1206 medium staple, 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Yarn Appearance Grades

Grade	Index
A	130
B+	120
B	110
C+	100
C	90
D+	80
D	70
Below D	60

Yarn imperfections are reported for the two yarn numbers spun for each lot of cotton. These results were obtained on "Neptel" instruments which electronically count the abrupt changes in the silhouette of the yarn while passing it through a beam of light. They are expressed as the number of imperfections per 50 yards of yarn and are based on the average of 10 determinations. This value is an instrument measure of product quality which is associated with the characteristics of the cotton. It is more highly correlated with fiber properties than either neps in card web or yarn appearance grade. The following descriptive terms may be of help in determining the relative level of yarn imperfections in this report:

Kind of yarn, staple length group, and description	Yarn imperfections for the specified yarn numbers	
Carded yarns:		
Short staple group:	8s	22s
Low	6 - 31	6 - 21
Average	32 - 57	22 - 37
High	58 - 83	38 - 53
Medium staple group:	22s	50s
Low	3 - 15	2 - 11
Average	16 - 28	12 - 21
High	29 - 41	22 - 31
Long staple group:	22s	50s
Low	7 - 22	6 - 17
Average	23 - 38	18 - 29
High	39 - 54	30 - 41
Combed yarns:		
Long staple group:	22s	50s
Low	0 - 8	0 - 6
Average	9 - 20	7 - 16
High	21 - 32	17 - 26
Extra-long staple group:	50s	80s
Low	0 - 1	0 - 1
Average	2 - 3	2 - 3
High	4 - 5	4 - 5

Data source - 291 short staple, 1206 medium staple, 78 long staple and 67 extra-long staple lots of cotton tested from the crops of 1966-68.

Spinning potential yarn number indicates the finest yarn number that can be spun from a cotton sample without any end-breakage when using specific processing procedures. In performing these tests, new travelers, draft gears, and twist gears are installed for the selected yarn number and it is spun for a 15-minute trial period. The yarn number selected is considered acceptable if there is an end-breakage involving 5 to 15 of the 96 spindles employed during the trial run. If end-breakages occur on less than 5 or more than 15 of the 96 spindles during the trial period, a different yarn number is selected to be spun for another 15-minute trial period until the acceptable end-breakage rate is obtained. The acceptable trial period is also used for a warm-up period which is followed by a 1-hour test period. The spinning potential yarn number is calculated from the deviation of the actual yarn number spun from the desired yarn number and the number of spindles with end-breakages during the 1-hour test run. The following descriptive terms may be of help in determining the relative level of spinning potential yarn numbers in this report:

Spinning Potential (SPY No.)

	Short staple group	Medium staple group	Long staple group
Low	31 - 39	55 - 63	77 - 83
Average	40 - 48	64 - 72	84 - 90
High	49 - 57	73 - 81	91 - 97

Data source - 123 short staple, 688 medium staple and 48 long staple lots of cotton tested from the crops of 1967-68.

Chemical Finishing Tests

Information with respect to the bleaching and dyeing properties of different varieties and growths of cotton is of particular significance to textile manufacturers from the standpoint of providing a basis for avoiding problems that may result from blending different varieties and growths having different dyeing properties. Data with respect to the chemical finishing properties of the principal varieties and growths of cotton as herein reported may thus be used as a basis for selecting cottons of similar finishing properties. Details of the chemical finishing tests are described in Agricultural Information Bulletin No. 167 - "Bleaching, Dyeing, and Mercerizing Test Results on Some Varieties of Cotton Grown by Selected Cotton Improvement Groups, Crop of 1955".

Color measurements of cotton yarn samples were made on a Gardner Automatic Color Difference Meter. These values are reported in terms of Rd and b, two of the three scales on the instrument. The R_d scale measures percentages of diffuse reflectance from 0 to 100. The b scale provides a measure of yellowness in the direction of +b and of blueness in the direction of -b. The degree of either yellowness or blueness increases as the scale numbers increase. These data when plotted with R_d on the vertical ordinate and with

b on the horizontal ordinate are similar to the color values for raw cotton when plotted in relation to the official grade standards as described in the earlier section on color of raw stock.

While the color factors R_d and b are not independent of each other and should be considered together in any overall interpretation, for many purposes it would be convenient in evaluating results to have them in terms of a single number. For raw cotton the grade index provides one way to do this in a straightforward manner. A similar method has been followed in developing conversion formulae and diagrams for each form of cotton measured for color as a part of the chemical finishing studies of the Cotton Division. In each, the index for Middling is held at 100 and that for Good Ordinary is held close to 70. By use of such indices the color measurements of raw stock, gray yarns, bleached yarns, and bleached and dyed yarns may be converted to a single number specification. For details see "Grade and Color Indexes Developed for Evaluating Results of USDA Cotton Finishing Tests", (AMS-245, June 1958).

Table 24--Cotton: Standard machine settings and specifications for processing specified staple length groupings

Process	Staple length groups			
	Short	Medium	Long	Extra long
1. PICKER				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Each test lot is processed through a finisher type picker twice to produce the specified weight of lap.....ounces per yard	14	14	14	11
Type of beater.....	Kirschner	Kirschner	Kirschner	Kirschner
Beater speed.....r.p.m.	1,000	1,000	1,000	1,000
Settings:				
Feed roll to beater.....inches	3/16	3/16	3/16	3/8
Grids to beater, top.....inches	5/16	5/16	5/16	9/16
Grids to beater, bottom.....inches	11/16	11/16	11/16	11/16
2. CARD				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Picker lap fed.....ounces per yard	14	14	14	11
Sliver delivered.....grains per yard	50	50	50	40
Production rate.....pounds per hour	12-1/2	9-1/2	6-1/2	4-1/2
Doffer speed.....r.p.m.	11	8	6	4
Cylinder speed.....r.p.m.	165	165	165	165
Flat speed.....inches per minute	2-7/8	2-7/8	2-7/8	2-7/8
Licker-in speed.....r.p.m.	435	435	435	435
Clothing:				
Cylinder, Hollingsworth metallic.....number	35	35	25	25
Doffer, Hollingsworth metallic.....number	29	29	29	29
Flats, Fillet.....number	110	110	130	130
Settings:				
Feed plate to licker-in.....inches	0.010	0.010	0.010	0.017
Mote knife to licker-in, top.....inches	.012	.012	.012	.012
Mote knife to licker-in, bottom.....inches	.010	.010	.010	.010
Licker-in screen, front.....inches	.029	.029	.029	.029
Licker-in screen, back.....inches	.017	.017	.017	.017
Licker-in to cylinder.....inches	.007	.007	.007	.007
Flats to cylinder, back, center, and front...inches	.009	.009	.009	.009
Back plate to cylinder, top.....inches	.029	.029	.029	.029
Back plate to cylinder, bottom.....inches	.034	.034	.034	.034
Front plate to cylinder, top.....inches	.029	.029	.029	.029
Front plate to cylinder, bottom.....inches	.034	.034	.034	.034
Doffer to cylinder.....inches	.007	.007	.007	.007
Cylinder screen, back.....inches	.029	.029	.029	.029
Cylinder screen, center.....inches	.034	.034	.034	.034
Cylinder screen, front.....inches	3/16	3/16	3/16	3/16
Doffer comb to doffer.....inches	.022	.022	.022	.022
Crusher rolls pressure.....pounds	281	281	281	281
3. SLIVER LAPTER (combed only)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Sliver fed, 20 each.....grains per yard	--	--	50	40
Lap delivered.....grains per yard	--	--	595	525
Speed.....yards per minute	--	--	46	46
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	--	--	5/16	5/16
Second to third.....inches plus fiber length 1/	--	--	9/16	9/16

1/ Allowances listed are in addition to fiber lengths in terms of "pulls" made on card sliver. These pulls are estimated from Fibrograph length tests except for extra long staple cottons.

Table 24--Cotton: Standard machine settings and specifications for processing specified staple length groupings--Continued

Process	Staple length groups			
	Short	Medium	Long	Extra long
4. RIBBON LAPPER (combed only)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Laps fed, 4.....grains per yard	--	--	595	525
Laps delivered.....grains per yard	--	--	610	610
Speed.....yards per minute	--	--	47	47
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	--	--	4/16	4/16
Second to third.....inches plus fiber length 1/	--	--	7/16	7/16
Third to fourth.....inches plus fiber length 1/	--	--	10/16	10/16
5. COMBER (Model D-4)				
Standard atmospheric conditions:				
Temperature.....degrees F.	--	--	75	75
Relative humidity.....percent	--	--	60	60
Laps fed, 8 each.....grains per yard	--	--	610	610
Sliver delivered.....grains per yard	--	--	50	40
Production per hour.....pounds	--	--	16	13
Setting of cushion plate to detaching roll.....inches	--	--	.48	.54
Nominal waste.....percent	--	--	16 to 17	16 to 17
6. DRAWING FRAME (synthetic top rolls)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
First process:				
Sliver fed, 6 each.....grains per yard	50	50	50	40
Sliver delivered.....grains per yard	60	53	53	42
Second process:				
Sliver fed, 6 each.....grains per yard	60	53	53	42
Sliver delivered.....grains per yard	70	55	55	44
Speed.....yards per minute	36	36	36	36
Roll settings (center to center):				
First to second.....inches plus fiber length 1/	4/16	4/16	4/16	4/16
Second to third.....inches plus fiber length 1/	7/16	7/16	7/16	7/16
Third to fourth.....inches plus fiber length 1/	10/16	10/16	10/16	10/16
7. LONG DRAFT ROVING (8 x 4, 2 apron type)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	60	60	60	60
Sliver fed.....grains per yard	70	55	55	44
Roving delivered.....hank	1.10	1.80	1.80	4.25
Spindle speed.....r.p.m.	1235	1235	1235	1235
Roll settings (center to center):				
First to second, standard.....inches	2-1/4	2-1/4	2-1/4	2-1/4
Third to fourth.....inches plus fiber length 1/	1/4	1/4	1/4	1/4
8. LONG DRAFT SPINNING (2 apron type)				
Standard atmospheric conditions:				
Temperature.....degrees F.	75	75	75	75
Relative humidity.....percent	65	65	65	65
Roving fed single.....hank	1.10	1.80	1.80	4.25
Twist multiplier.....number	4.4	4.0	3.8	3.6
Carded yarns.....number 2/	8s & 22s	22s & 50s	22s & 50s	--
Combed yarns.....number	--	--	22s & 50s	50s & 80s
Spindle speed.....r.p.m. 3/	9000	9000	9000	9000
Roll settings (center to center):				
First to second, standard.....inches	2-1/16	2-1/16	2-1/16	2-1/16
Second to third, standard.....inches	1-3/4	1-3/4	1-3/4	1-3/4

2/ Additional yarn is spun on a 96 spindle wide gage frame at 9,000 r.p.m. spindle speed to determine the spinning potential yarn number or the finest yarn number that can be spun without end-breakage.

3/ All standard yarn numbers are spun on narrow gage frames with spindle speeds of 9,000 r.p.m. except for 8s, which are spun on a wide gage frame with spindle speed of 5,500 r.p.m.